

2060 KNOLL DRIVE, SUITE 200, VENTURA, CALIFORNIA 93003 (805) 644-5892 • FAX (805) 654-0720

ALCO HAZMAT 94 MAY -2 PH 2: 53

April 28, 1994

Ms. Jennifer Eberle, Haz. Materials Specialist Alameda County Health Care Service Department of Environmental Health 80 Swan Way, Rm. 200 Oakland, CA 94621

Subject:

Groundwater Monitoring Report for

4035 Park Blvd.

Oakland, California 94602

Dear Ms. Eberle:

Enclosed is the most recent Groundwater Monitoring Report for the above referenced property.

Please call Mr. Rick Pilat at RSI if you have any questions regarding this report.

Sincerely,

Heather Davis

Remediation Service, Int'l.

CC:

John Rutherford Desert Petroleum

Mr. Rich Hiett San Francisco Bay RWQCB 2101 Webster St., Ste. 500 Oakland, CA 94612

enclosure



2060 KNOLL DRIVE, SUITE 200, VENTURA, CALIFORNIA 93003 (805) 644-5892 • FAX (805) 654-0720

ALCO HAZMAT 94 MAY -2 PM 2: 53

### GROUNDWATER MONITORING REPORT

for

4035 Park Blvd. Oakland, California

Prepared for: **DESERT PETROLEUM** 

P.O. Box 1601 Oxnard, CA 93032 (805) 644-6784

Prepared by:

RSI - REMEDIATION SERVICE, INT'L

2060 Knoll Drive, Suite 200 Ventura, CA 93003 (805) 644-5892

> Michael Mulhern E.G. #1507

> > April 15, 1994

### TABLE OF CONTENTS

1.0	INTRODUCTION	Page 1
2.0	GROUNDWATER MONITORING 2.1 Groundwater Monitoring Procedures 2.2 Groundwater Monitoring Results	Page 1 Page 1 Page 2
3.0	LIMITATIONS	Page 2
FIG	URES	
	<ol> <li>Location Map</li> <li>Site Plan</li> <li>Groundwater Contour Map</li> <li>Map of Groundwater Analytical Results</li> </ol>	
TAE	BLES 1. Groundwater Data 2. Summary of Laboratory Analytical Results	

A. Groundwater Sample Logs
B. Laboratory Report & Chain of Custody

**APPENDICES** 

#### 1.0 INTRODUCTION

This report presents the results of groundwater monitoring for the real property located at 4035 Park Boulevard, Oakland, Alameda County, California (Figure 1). Remediation Service, Int'l. (RSI) is under contract to provide environmental services.

The property was previously operated as a retail fuel station under the name of J & M Service Station. The station was leased by a Mr. Jason Golpad. In November, 1989, the Alameda County Department of Environmental Health (ACDEH) gave notice that gasoline was leaking into a sewer near the station on Brighton Avenue (Figure 2). Pressure tests revealed a leak in the unleaded supply line. In December, 1989 the fuel tanks were emptied, the station was closed and an Unauthorized Release Report was filed.

#### 2.0 SITE DESCRIPTION

The subject property is located at the intersection of Park Boulevard and Hampel Road (Figure 2). One station building, three steel underground fuel storage tanks, two pump islands and three groundwater monitoring wells are present at the site (Figure 3). A groundwater monitoring well has also been installed in the street below and approximately 200 feet northwest of the subject site.

The site is situated on the flank of a hill which slopes approximately 10 degrees to the west. The surface of the property is fairly level (Figure 3). Based on the U.S.G.S topographical map, the surface elevation of the station is approximately 240 feet above mean sea level (MSL). There is an approximate 12 foot drop from the surface of the property at the far western corner to the ground surface below.

#### 2.0 GROUNDWATER MONITORING

2.1 Groundwater Monitoring Procedures

On April 7, 1994, under the direction of Ms. Jennifer Eberle, ACDEH, groundwater monitoring wells RS-1, RS-5, RS-6 & RS-7 were measured for depth to water and checked for the presence of free product. The wells were measured to an accuracy of 0.01 feet and the measuring point for each well was the top of the well casing on the north side. Free product was not found in any of the wells. The wells were then purged until dry or a minimum of three well volumes had been removed. Purging was accomplished using a PVC bailer; the purged water was monitored for temperature, conductivity and pH. These measurements, along with all other pertinent data, were recorded on Water Sample Logs (Appendix A).



Once the well parameters had stabilized, they were sampled using disposable polyethylene bailers. The samples were labeled and placed on blue ice for transportation to Coast to Coast Analytical, a state certified laboratory. All samples were analyzed for total petroleum hydrocarbons as gasoline (TPH) using EPA Method 8015M, and benzene, toluene, ethyl-benzene and total xylenes (BTEX) using EPA Method 8020. The laboratory report and chain of custody are included as Appendix B.

2.2 Groundwater Monitoring Results

Depth to groundwater on April 7, 1994 ranged between 13.00 feet and 18.16 feet below ground surface in the wells on the site (RS-1, RS-5 & RS-6) (Table 1). Based upon a previous consultants survey data, the estimated groundwater flow direction is towards the northwest. A contour map of estimated groundwater elevations is included as Figure 3.

Analytical results for the samples collected during the current and previous monitoring episodes are summarized on Table 2 and the current results are shown graphically on Figure 4. The laboratory report and Chain-of-Custody documents are included in Appendix B. As reported on Table 2, elevated concentrations of TPH and BTEX were detected in the samples collected from all four wells.

#### 3.0 LIMITATIONS

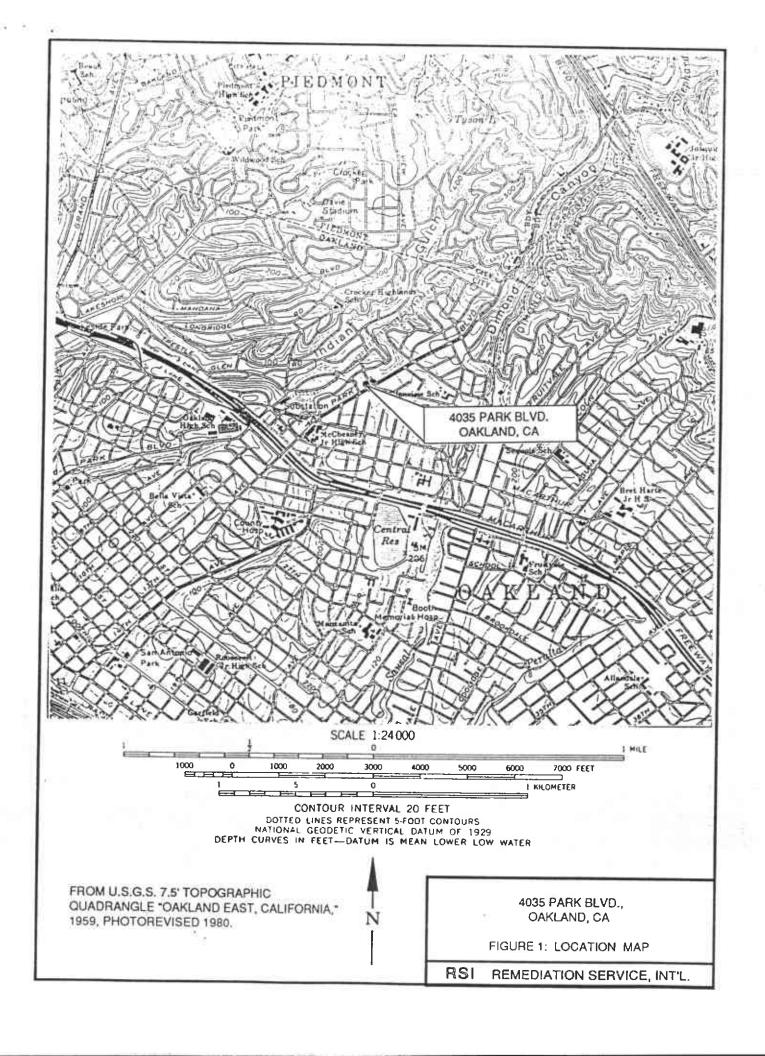
The discussion, conclusion and any recommendations presented in this report are based on the professional performance of the personnel who conducted the investigations, the observations of the field personnel, the results of laboratory analyses performed by a state certified laboratory, any referenced documents and our understanding of the regulations of the State of California and any other applicable local regulations.

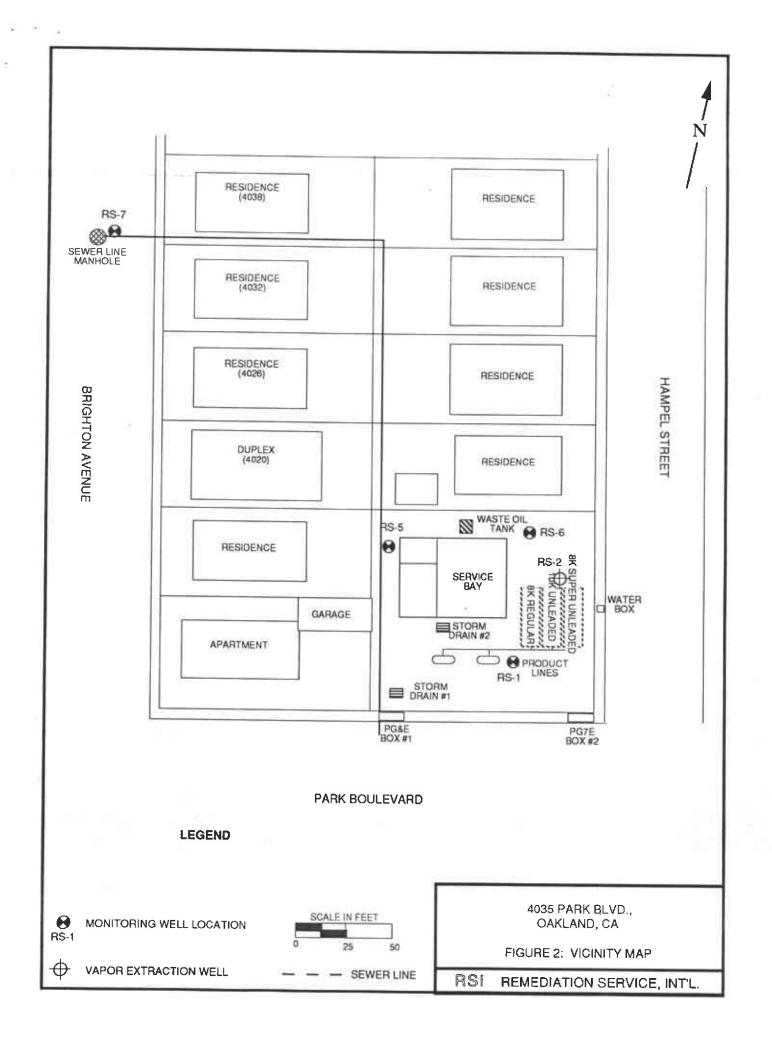
Variations in the soil and groundwater conditions may exist beyond the points explored in this investigation.

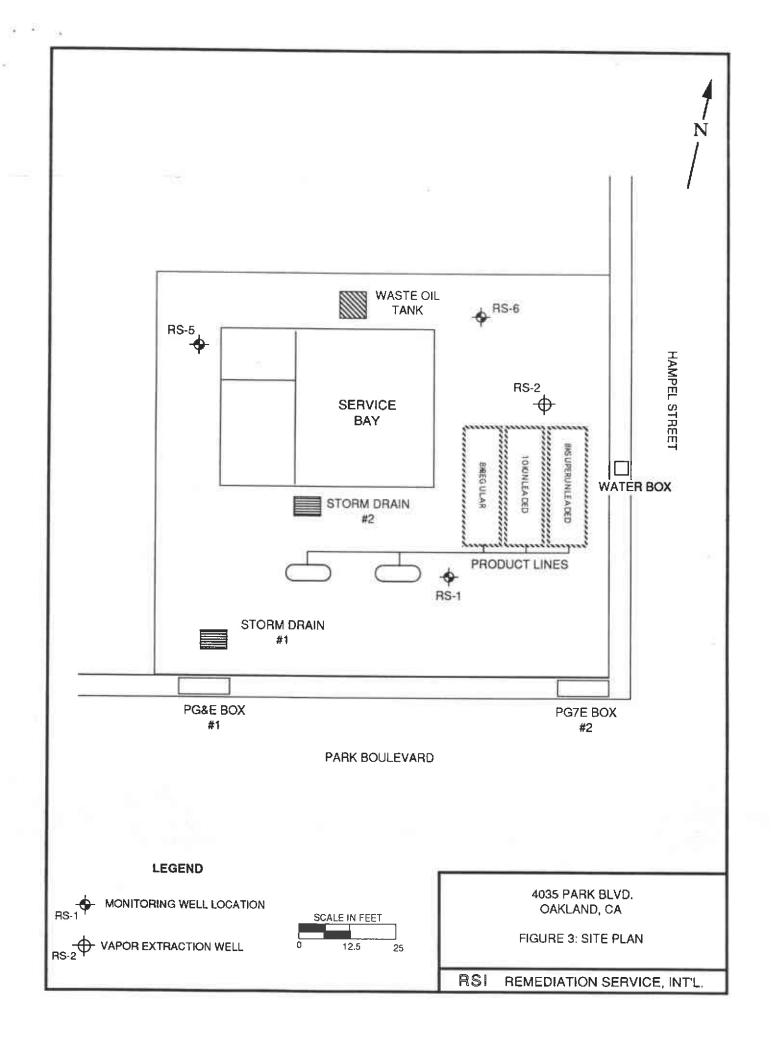
The services performed by Remediation Service, Int'l have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the State of California.

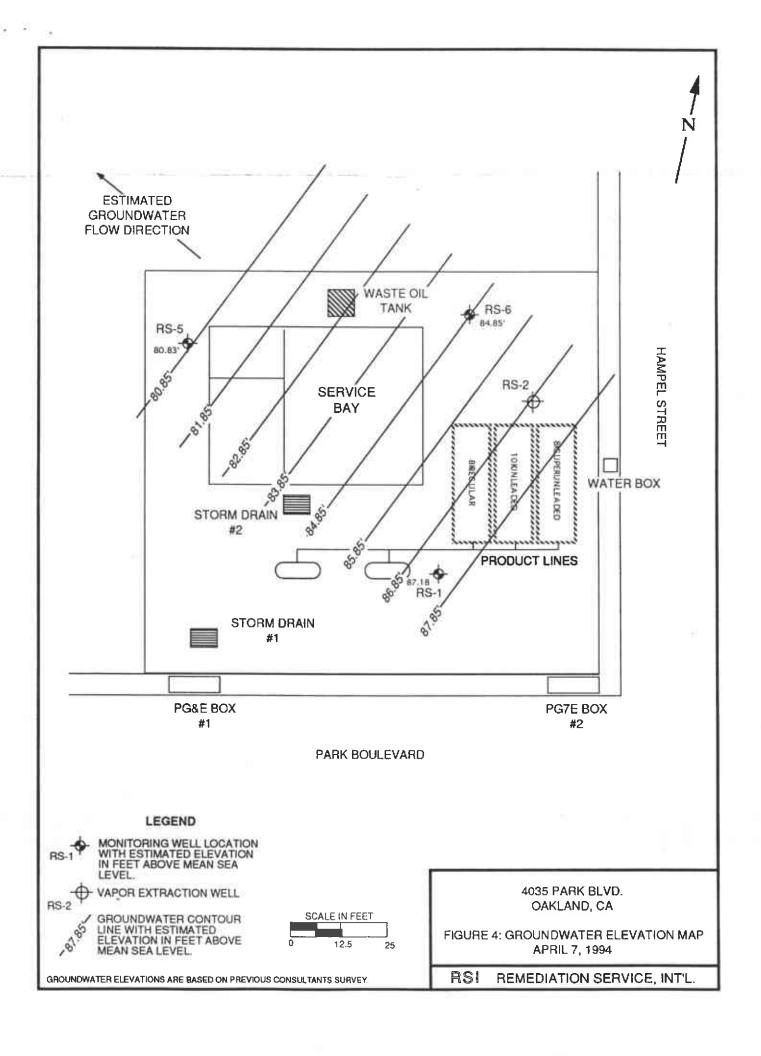
Please note that contamination of soil and/or groundwater must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

n where?









# TABLE 1 SUMMARY OF GROUND WATER ELEVATION DATA 4035 PARK BLVD. OAKLAND, CA

Measurements are in feet.

GWE

Well	Date Measured	Depth to Water	Well Head Elevation*	Water Table Elevation*	Change in Elevation
RS-1	11/9/92 4/7/94	17.05 13.00	100,18	83.13 87.18	4.05
RS-5	11/9/92 4/7/94	20.73 18.16	98.99	78.26 80.83	2.57
RS-6	11/9/92 4/7/94	19.43 14.42	99.27	79.84 84.85	5.01
RS-7	11/9/92 4/7/94	4.62 4.03	67.88**	63.26 63.85	0.59

<sup>\*</sup>Elevation in feet above Mean Sea Level.



<sup>\*\*</sup>RS-7 elevation from survey, RESNA Groundwater Monitoring Report 2/92. Wells RS-1, -5, and -6 elevations were resurveyed with RS-1 elevation datum taken from RESNA survey.

# TABLE 2 SUMMARY OF GROUND WATER ANALYTICAL RESULTS 4035 PARK BLVD. OAKLAND, CA

Measurements are in µg/L (parts per billion)

WELL # SAMPLED (as gasoline) BENZENE TOLUENE BENZENE XYLENES  RS-1 12/89 19,000 2,600 2,700 200 1,200 12/90 15,000 3,500 330 170 760 2/91 6,900 910 200 39 540 6/91 1,600 56 180 12 26 9/91 4,100 730 7.6 5.1 24 12/91 8,300 950 160 71 190 11/92 1,700 730 9.6 16 14 4/94 860 √ 84 √ 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 √ 5,000 ↑ 8,700 ↑ 550 √ 2,800 √  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 ↓  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 ↓  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 4/94 74,000 √ 16,000 710 500 13,000 4/94 74,000 √ 16,000 710 500 13,000	·						
RS-1 12/89 19,000 2,600 2,700 200 1,200 12/90 15,000 3,500 330 170 760 2/91 6,900 910 200 39 540 6/91 1,600 56 180 12 26 9/91 4,100 730 7.6 5.1 24 12/91 8,300 950 160 71 190 11/92 1,700 730 9.6 16 14 4/94 860 84 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 650 3,700 550 2,800 ↓  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 ↓  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 7270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		DATE	TPH			ETHYL-	TOTAL
12/90	WELL#	SAMPLED	(as gasoline)	BENZENE	TOLUENE	BENZENE	XYLENES
2/91 6,900 910 200 39 540 6/91 1,600 56 180 12 26 9/91 4,100 730 7.6 5.1 24 12/91 8,300 950 160 71 190 11/92 1,700 730 9.6 16 14 4/94 860 √ 84 √ 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 √ 2,800 √  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000	RS-1	12/89	19,000	2,600	2,700	200	1,200
6/91 1,600 56 180 12 26 9/91 4,100 730 7.6 5.1 24 12/91 8,300 950 160 71 190 11/92 1,700 730 9.6 16 14 4/94 860 84 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 2,800 ↓  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		12/90	15,000	3,500	330	170	760
9/91 4,100 730 7.6 5.1 24 12/91 8,300 950 160 71 190 11/92 1,700 730 9.6 16 14 4/94 860 √ 84 √ 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 √ 2,800 √  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 1,100 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √ 1,201 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		2/91	6,900	910	200	39	540
12/91 8,300 950 160 71 190 11/92 1,700 730 9.6 16 14 4/94 860 84 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 2,800 €  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 ✔  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		6/91	1,600	56	180	12	26
11/92 1,700 730 9.6 16 14  4/94 860 √ 84 √ 12 16 110  RS-5 12/89 57,000 3,100 4,300 670 3,400  2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000  4/94 27,000 √ 5,000 8,700 7 550 √ 2,800 √  RS-6 12/89 11,000 1,400 1,700 160 860  2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700  9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600  4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000  2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		9/91	4,100	730	7.6	5.1	24
RS-5 12/89 57,000 3,100 4,300 670 3,400  2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000  4/94 27,000 5,000 1,400 1,700 160 860  2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700  9/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700  9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 1 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000  RS-7 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		12/91	8,300	950	160	71	190
RS-5 12/89 57,000 3,100 4,300 670 3,400  2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 2,800 €  RS-6 12/89 11,000 1,400 1,700 160 860  2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700  9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 € 1,200 € 1,300 290 € 1,100 €  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 8/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		11/92	1,700	730	9.6	16	14
2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 2,800 ↓  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		4/94	860 √≎	84 🌡	/ 12	16	110
2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 2,800 ↓  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000	RS-5	12/89	57 000	3 100	4 300	670	3 400.
6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 5,000 8,700 550 2,800 ✓  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 ✓  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000			•				0,
9/91 Not sampled due to presence of free product 12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 √ 5,000 ↑ 8,700 ↑ 550 √ 2,800 √  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000							
12/91 Not sampled due to presence of free product 11/92 50,000 650 4,800 1,100 15,000 4/94 27,000 √ 5,000 ↑ 8,700 ↑ 550 √ 2,800 √  RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 ↑ 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000			•				
11/92 50,000 650 4,800 1,100 15,000  4/94 27,000 5,000 8,700 550 2,800   RS-6 12/89 11,000 1,400 1,700 160 860  2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700  9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600  4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 ✓  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000  2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000			•	•	•		
RS-6 12/89 11,000 1,400 1,700 160 860 2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 √ RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000			•				15.000
2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 √ 1,200 √ 1,300 290 √ 1,100 √ 1,100 √ 1,201 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000							
2/91 Not sampled due to presence of free product 6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 √ 1,200 √ 1,300 290 √ 1,100 √ 1,100 √ 1,201 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000	BS-6	12/89	11 000	1 400	1 700	160	860
6/91 95,000 4,200 4,200 650 3,700 9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 √ 1,200 √ 1,300 290 √ 1,100 √  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000	1,00		· ·	•	· · · · · · · · · · · · · · · · · · ·		000
9/91 Not sampled due to presence of free product 12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 1,200 1,300 290 1,100   RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000							2 700
12/91 64,000 3,700 2,300 730 4,100 11/92 19,000 1,600 710 500 1,600 4/94 16,000 1,200 1,300 290 1,100  RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000			•	•			3,700
11/92 19,000 1,600 710 500 1,600 4/94 16,000 1,200 1,300 290 1,100   RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000							4.100
A/94 16,000    1,200    1,300    290    1,100    RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000				•			
RS-7 7/90 5,600,000 24,000 210,000 50,000 740,000 2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000						,	
2/91 Not sampled due to presence of free product 6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000		4/34	16,000 \$	ν 1,200 <b>ψ</b>	* 1,300 ţ	290 y	1,100 \$
6/91 Not sampled due to presence of free product 9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000	RS-7	7/90	5,600,000	24,000	210,000	50,000	740,000
9/91 Not sampled due to presence of free product 12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000							
12/91 270,000 11,000 22,000 2,000 13,000 11/92 81,000 12,000 16,000 1,900 13,000							
11/92 81,000 12,000 16,000 1,900 13,000			•	•	•	roduct	
A			·	•	•	2,000	
4/94 * 74,000 16,000 - 1,400 \ 8,500 \		×1			. / '		
		4/94	74,000	16,000	16,000 ~	- 1,400 🎶	8,500 炬

Note:

TPH analyzed by EPA Method 8015M BTEX analyzed by EPA Method 8020



# APPENDIX A WATER SAMPLE LOGS

PROJECTIC	OCATION:	4035 Park B	lvd., Oakland	I, CA	DATE	E: <u>4/7/94</u>	······································
WELL NUMI	BER:	RS-1	····				
WEATHER C	ONDITIONS: _	Clear, sunny	, breezy				
FIELD OBSE	RVATIONS:	Bailed well u	intil dry.				
TOTAL DEPT	TH OF WELL:_	15.85	feet	CASING DIAM	ETER:	4	inches
DEPTH TO FE	REE PRODUCT:	NONE		ONE WELL VO	DLUME =	3.49	gallons
DEPTH TO W	/ATER:	13	feet	PURGING MET	HOD:	PVC Bailer	
DEPTHS ME	ASURED FROM	·		casing, north si			
							· · · · · · · ·
	<u></u> :						
<u> </u>	1		WELL PURG		<del></del>		
				Specific			
	Discharge			Conductance			
Time	(gallons)	рН	Temp in F.	(µmhos/cm)	Comment	s (Color, Odor, T	urbidity)
12:00	0	6.74	71.6	8.21	Clear,	no HC odor,	none
12:02	5	6.73	71.4	8.20	Clear,	no HC odor,	none
12:05	8	6.73	71.0	8.17	Clear,	no HC odor,	none
	Dry		<del></del> .				
<u> </u>			· · · · · · · · · · · · · · · · · · ·				
					·		
						<del></del>	
TOTAL DISCH	HARGE:	88	gallons	WELL VOLUME	ES REMOVED	2.3	
	COLLECTED:						
	ATER AT TIME		13.00	feet	PERCENT RE	CHARGE:	100
	SAMPLE COLL		Disposable B	ailer			<u> </u>
	E OF SAMPLE:		Clear				<u> </u>
	SIZE OF SAMI			3 - 40 ML VO			
SAMPLE TRA	ANSPORTED T	O: Coast	to Coast Ana	llytical, Camaril	lo		
011481 == ==							
SAMPLED BY	·	DA			1	学業 REMEDIATION SER	
						DR.,SUITE 200,VENTURA,C 892 = FAX (805) 654-0720	

					DATE:	4/7/94	···
PROJECT LO	DCATION:	4035 Park Bl	lvd., Oakland	, CA			
WELL NUME	3ER:	RS-5	78. Volum 11 - 2 F				
WEATHER	ONDITIONS:	01	<b>h</b>				
FIELD OBSE	_	Clear, sunny		ffic box is not	watartiaht		
1 1220 00021	17/11/01/0.	Well Seal IIO	i illaci. Tra	INC DOX IS NOT	watertight.		
						· • • • • • • • • • • • • • • • • • • •	
	TH OF WELL:		feet	CASING DIAM	ETER:	4	inches
	REE PRODUCT:	NONE		ONE WELL VO	DLUME =	26.00	gallons
	/ATER:		feet	PURGING MET	HOD:	PVC Bailer	
DEPTHS ME	ASURED FROM	:	Top of well of	casing, north s	ide.		<del></del>
		<u> </u>	WELL PURG	NO DATA			·
			WELL PUNG	Specific			
	Discharge			Conductance			
Time -	(gallons)	рН	Temp in F	(µmhos/cm)		s (Color, Odor, Tı	arbidity)
12:04	10	6.67	68.2	6.49	Lt. brown,		
12:10	20	6.43	67.8	6.35	Lt. brown,	······································	silty
12:12	30	6.43	68.3	6.79	Lt. brown,		silty
12:16	35	6.38	69.9	6.80	Lt. brown,		silty
					,	,	
				•			
			· · · · · · · · · · · · · · · · · · ·				
TOTAL DISC	HARGE:	35	gallons	WELL VOLUM	ES REMOVED	1.3	
TIME SAMPLI	E COLLECTED:	2:20 PM					
	ATER AT TIME		18.15	feet	PERCENT RE	CHARGE:	100 .
	SAMPLE COLL	and the second second second					
	E OF SAMPLE:		It. brown				
AMOUNT ANI	D SIZE OF SAM	PLE CONTAIN	IERS:	3 - 40 ML VO	A's		
SAMPLE TRA	ANSPORTED T	O: Coast	to Coast Ana	alytical, Camari	llo		
SAMPLED BY	/:	DA			1	F I REMEDIATION SER	="
						DR., SUITE 200, VENTURA, CA 892 - FAX (805) 654-0720	A 93003

PROJECT LO	OCATION:	4035 Park Bl	lvd., Oakland	, CA	DATE	E: <u>4/7</u>	7/94	
WELL NUM	BER:	RS-6						
					OVM reading	g = 173 p	pmv	
DEPTH TO F	TH OF WELL: REE PRODUCT: VATER:	NONE		ONE WELL VO	)LUME =		24.03	inches gailons
	ASURED FROM							
· · · · · · · · · · · · · · · · · · ·	<u> </u>	· · · · · · · · ·	WELL PURG	ING DATA		···		<del></del>
Time	Discharge (gallons)	рН	Temp in F.	Specific Conductance (µmhos/cm)	Commen	ts (Color,	Odor, Tu	rbidity)
	5 10	6.59 6.97	67.1 69.3	6.82 6.87	Grey,	strong l	iC odor,	Sec.
12:30	20 25	6.69 6.68	69.6 69.5	6.90 6.87	Grey, Grey,	strong	IC odor,	4:
						-		
							· · · · · · · · · · · · · · · · · · ·	
TOTAL DISC	HARGE:	25	gallons	WELL VOLUME	ES REMOVED	): 	1.0	
	E COLLECTED: VATER AT TIME			foot	DEDOENTRE	CHARCE		
METHOD OF APPEARANCE	SAMPLE COLL CE OF SAMPLE:	ECTION:	Disposable B grey, HC ode	ailer or.	PERCENT RE			61
and the second second	D SIZE OF SAM ANSPORTED 1			3 - 40 ML VO alytical, Camaril				
SAMPLED BY	Y:	DA	· · · · · · · · · · · · · · · · · · ·				ATION SERVI	

		W			DATE: 4/7/94
PROJECTIO	DCATION:	4035 Park Blvd., Oakland, CA			-
WELL NUMI	BER:	RS-7			-
WEATHERO	ONDITIONS:	Cloar suppu	broom		
FIELD OBSE			r, breezy dry.		OVM field reading = ND
	_				sheen on water in drum.
	_		-garns-corrag	o odor. Oligin	on on nator in aram.
TOTAL DEP	TH OF WELL:	7.16	feet	CASING DIAM	ETER: 4 inches
DEPTH TO F	REE PRODUCT	: NONE		ONE WELL VO	OLUME = 3.83 gallons
	VATER:	4.03			NHOD: PVC Bailer
DEPTHS ME	ASURED FROM	Λ:	Top of well of	casing, north s	ide.
···			WELL		
		1	WELL PURG	1	
	Disabassa			Specific	
Time	Discharge	.,		Conductance	
	(gallons)	pH		(µmhos/cm)	
10:20	0	6.59	67.1	6.82	Clear, organic odor,
10:23	10	6.97	69.3	6.87	Clear, organic odor,
10.20	Dry	6.69	69.6	6.90	Clear, organic odor,
		<u> </u>			
			<u></u>		
		<del> </del>			
	·				
t	I	<u> </u>	L		
TOTAL DISCI	HARGE:	12	gallons	WELL VOLUMI	ES REMOVED: 3.1
		-	··-		
	E COLLECTED				
DEPTH TO W	ATER AT TIMI	EOFSAMPLE:	5.00	feet	PERCENT RECHARGE: 69
	SAMPLE COLI		Disposable B	ailer	
	E OF SAMPLE	***	Clear		· · · · · · · · · · · · · · · · · · ·
	D SIZE OF SAN			3 - 40 ML VO	
SAMPLE TRA	ANSPORTED	TO: Coas	t to Coast Ana	llytical, Camaril	llo
0.11.401 ED D.					
SAMPLED BY	r:	DA			E E REMEDIATION SERVICE, INT'L.
					2060 KNOLL DR., SUITE 200, VENTURA, CA 93003 (805) 644-5892 • FAX (805) 654-0720

#### APPENDIX B

#### LABORATORY REPORTS AND CHAIN OF CUSTODY



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

CLIENT: Rick Pilat

R.S.I.

P.O. Box 1601 Oxnard, CA 93032 Lab Number: JK-1115-1

Project

: Desert Petroleum, 4035

Park, Oakland

Analyzed

: 04/13/94

Analyzed by: LD

Method

: EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE	RECEIVED
RS-7	Groundwater	Rick Pilat		04/07/94	04/07/94
CONSTITUENT		(CAS RN)	*PQL μg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)					1
Benzene			500.	16000.	
Toluene			500.	16000.	
Ethylbenzene			500.	1400.	
Xylenes			500.	8500.	
Total Petroleum Hydrocarbons (Gasoline	)	5	.0000	74000	
Percent Surrogate Recovery				97.	

San Jose Lab Certifications: CAELAP #1204

\*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) EXTRACTED by EPA 5030 (purge-and-trap)

04/14/94 GC#4/412A623 DT/et/lmd W-GAS-041294

Respectfully submitted, COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres Organics Manager

Reports shall not be reproduced except in full without the written consent of Coast-to-Coast Analytical Services Inc.



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

CLIENT: Rick Pilat

R.S.I.

P.O. Box 1601 Oxnard, CA 93032 Lab Number: JK-1115-2

Project

: Desert Petroleum, 4035

Park, Oakland

Analyzed

: 04/12/94

Analyzed by: LD

Method

: EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE	RECEIVED
RS-1	Groundwater	Rick Pilat		04/07/94	04/07/94
CONSTITUENT		(CAS RN)	*PQL μg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)					1
Benzene			3.	84.	
Toluene			3.	12.	
Ethylbenzene			3.	16.	
Xylenes			3.	110.	
Total Petroleum Hydrocarbons (Gasoline	) .	;	300.	860.	
Percent Surrogate Recovery				83.	

San Jose Lab Certifications: CAELAP #1204

\*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) EXTRACTED by EPA 5030 (purge-and-trap)

04/14/94 GC#4/412A611 DT/et/lmd W-GAS-041294

Respectfully submitted, COAST-TO-COAST ANALYTICAL SERVICES, INC.

Budley forres Organics Manager

Reports shall not be reproduced except in full without the written consent of Coast-to-Coast Analytical Services Inc.



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

CLIENT: Rick Pilat

R.S.I.

P.O. Box 1601 Oxnard, CA 93032 Lab Number : JK-1115-3

Project

: Desert Petroleum, 4035

Park, Oakland

Analyzed

: 04/13/94

Analyzed by: LD

Method : EPA 8020/8015M

#### REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE	RECEIVED
RS-5	Groundwater	Rick Pilat		04/07/94	04/07/94
CONSTITUENT		(CAS RN)	*PQL μg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)					1
Benzene			100.	5000 •	
Toluene			100.	8700.	
Ethylbenzene			100.	550.	
Xylenes			100.	2800.	
Total Petroleum Hydrocarbons (Gasoline	)	<u>:</u>	10000.	27000.	
Percent Surrogate Recovery				100.	

San Jose Lab Certifications: CAELAP #1204

\*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) EXTRACTED by EPA 5030 (purge-and-trap)

04/14/94 GC#4/413A611 DT/et/lmd W-GAS-041394

Respectfully submitted, COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres Organics Manager



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

CLIENT: Rick Pilat

R.S.I.

P.O. Box 1601 Oxnard, CA 93032 Lab Number: JK-1115-4

Project : Desert Petroleum, 4035

Park, Oakland

Analyzed : 04/13/94

Analyzed by: LD

Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

MATRIX	SAMPLED BY		SAMPLED DATE	RECEIVED
Groundwater	Rick Pilat		04/07/94	04/07/94
	(CAS RN)	*PQL μg/L	RESULT µg/L	NOTE
			,	1
		30.	1200.	
		30.	1300.	
		30.	290.	
		30.	1100.	
ıe)	3	3000.	16000.	
-			104.	
	Groundwater	Groundwater Rick Pilat (CAS RN)	Groundwater Rick Pilat  (CAS RN) *PQL μg/L  30. 30. 30. 30.	Groundwater Rick Pilat 04/07/94  (CAS RN) *PQL RESULT \(\mu g/L\) \(\mu g/L\)  30. 1200. 30. 1300. 30. 290. 30. 1100. 30. 16000.

San Jose Lab Certifications: CAFLAP #1204

\*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) EXTRACTED by EPA 5030 (purge-and-trap)

04/14/94 GC#4/412A622 DT/et/lmd W-GAS-041294

Respectfully submitted, COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres

Organics Manager

COAST . TO . Chain of Custody COAST 4765 Calle Quetzal 🕠 • Camarillo, CA 93012 (805) 389-1353 FAX (805) 389-1438 ANALYTICAL 7726 Moller Rd. Indianapolis, IN 46268 (317) 875-5894 FAX (317) 872-6189 2059 Junction Ave. **SERVICES** San Jose, CA 95131 (408) 955-9077 FAX (408) 955-9078 141 Suburban Road San Luis Obispo, CA 93401 Valparaiso, IN 46383 Page \_\_\_\_ of \_\_\_ (805) 547-3888 FAX (805) 543-2685 2400 Cumberland Dr. (219) 464-2389 FAX (219) 462-2953 340 County Road No. 5 Westbrook, ME 04092 (207) 874-2400 FAX (207) 775-4029 PLEASE PRINT IN PEN Client Contact PETZOLFUN Phone # FAX # PILAT DESE 25 (405 644 Address City State Zip Project Name/Number Project MGR GAKLAND Bill (If different than above) Sampler (Print and sign) Due Date Copies To: Auth, Init. Date/Time # of \*Matrix Containers Pres. \* Subject to Availability Sample Description Coll'd Analysis Remarks Lab ID # 25-Trad(w) 7PH 605 BEY **RS** -11 10 Relinquished By Date/Time Received By Relinquished By Date/Time Received By 330 :00 ONLY Shipping Method Shipping # \* Matrix: DW - Drinking Water Received By Date/Time Condition (See Remarks) Sealed Intact WW - Wastewater USE GW - Groundwater SW - Surface Water REMARKS - Impinger LAB Filter Free Product - Air/Gas FO. Sludge/Soil/Solid Other

LAB

With the same