REMEDIATION SERVICE, INT'L.

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

QUARTERLY REPORT
of
FEBRUARY 8, 1995
GROUNDWATER SAMPLING AND
WATER QUALITY MONITORING

2844 Mountain Boulevard
Oakland, CA

Prepared for:
DESERT PETROLEUM
P.O. Box 1601
Oxnard, CA 93032

Prepared by:
RSI - REMEDIATION SERVICE, INT'L
2060 Knoll Drive
Ventura, CA 93003

Michael E. Mulhern
E.G. #1507
Exp. 10/31/96

March 3, 1995

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring for the real property located on the northeast corner of the intersection of Mountain Boulevard and Werner Court at 2844 Mountain Boulevard in Oakland, Alameda County, California 94602 (Figure 1). The Warren Freeway, which is adjacent to Mountain Boulevard, lies approximately 50 feet southwest of the site.

The property is currently occupied by a retail gasoline station. Three underground storage tanks, two pump islands and an office/garage building are present at the site. The tanks, which have individual storage capacities of 3,000, 4,000, and 10,000 gallons, originally contained various grades of unleaded gasoline. The current owners and operators of the station use one of the underground tanks for diesel storage and distribution.

2.0 BACKGROUND

The following historical summary of the above-referenced site is based on our review of the documents referenced. A summary of groundwater analytical results is included as Table 2.

Soil contamination was originally identified by Diablo Tank & Equipment during replacement of the product lines in March, 1989. Analytical results for a soil sample collected from the southern edge of the premium unleaded tank reported a total petroleum hydrocarbons as gasoline (TPH) concentration of 8,400 mg/Kg (parts per million). Samples from beneath the lines near the pump islands reported TPH concentrations of less than 100 mg/Kg. In July, 1989, On-Site Technologies excavated and disposed of contaminated soil from the southern end of the premium unleaded tank. Analysis of twelve soil samples collected from the sides of the excavation reported TPH concentrations ranging between ND to 3,300 mg/Kg (On-Site Technologies, Soil Sampling Report dated 8/31/89).

In May, 1990 RSI conducted further assessment of the site (RSI, Site Assessment Report dated July 25, 1990). Four groundwater monitoring wells (RS-1 through RS-4, Figure 2) were installed and sampled. Analysis of soil samples collected from above the water table reported TPH concentrations ranging from 1 to 240 mg/Kg. Hydrocarbons were detected in the groundwater samples collected from all four wells (Table 2).

Active remediation of soil contamination began at the site in June, 1991 using a Soil Vapor Extraction System (SVE) to vacuum extract gasoline hydrocarbons from the soil. Groundwater remediation began in October, 1991. Active remediation was suspended temporarily between February, 1992 and February, 1994.

The site has been monitored on a quarterly basis since the site assessment in May, 1990. Over this period, levels of hydrocarbons measured at this site have become asymptotic. Analytical results for groundwater samples collected during previous and current groundwater monitoring are summarized in Table 2.

A Corrective Action Plan for no further action was submitted to Alameda County Department of Environmental Health (ACDEH) on February 21, 1995. This plan is still under review.

3.0 GROUNDWATER MONITORING,

3.1 Groundwater Monitoring Procedures

On February 8, 1995, groundwater monitoring wells RS-1, RS-2, RS-3 and RS-4, were measured for potentiometric groundwater elevation and checked for the presence of free product (Table 1). The wells were measured to an accuracy of 0.01 feet and the measuring point for each well was the top of the sleeve of the well casing from a notched point on the north side. No free product was found. After measuring, the wells were purged with a Grundfos Rediflo-2 electric pump and sampled. The pump and hoses were decontaminated between wells using a standard 3-bucket wash method with TSP. Purging continued until the wells were dry or three well volumes had been removed. 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).

When the water levels had recharged to 80 percent, or a two hour time period had lapsed since purging, the wells were sampled with disposable polyethylene bailers. The samples were sealed, labeled and placed on blue ice for transportation to Holguin, Fahan and Associates, Inc., a state certified laboratory in Ventura, California. All samples were analyzed for TPH as gasoline and for benzene, toluene, ethyl-benzene and xylenes (BTEX) using standard EPA approved methods. Wells RS-1 and RS-4 were also sampled for TPH as motor oil using standard EPA approved methods. The laboratory reports are contained in Appendix B.

3.2 Groundwater Monitoring Results

As reported on Table 1, depth to groundwater on the site ranged between 4.51 and 7.93 feet below ground surface (bgs). Groundwater gradient was calculated to be approximately 0.057 feet/foot across the site with groundwater flow in a generally southwesterly direction. A contour map of groundwater elevations is included as Figure 3.

Analytical results for groundwater samples collected on February 8, 1995 are summarized in Table 2 and the complete laboratory report is contained in Appendix B. A site map showing groundwater analytical results is included as Figures 4. As reported on Table 2, hydrocarbon concentrations have increased in wells RS-1, RS-2

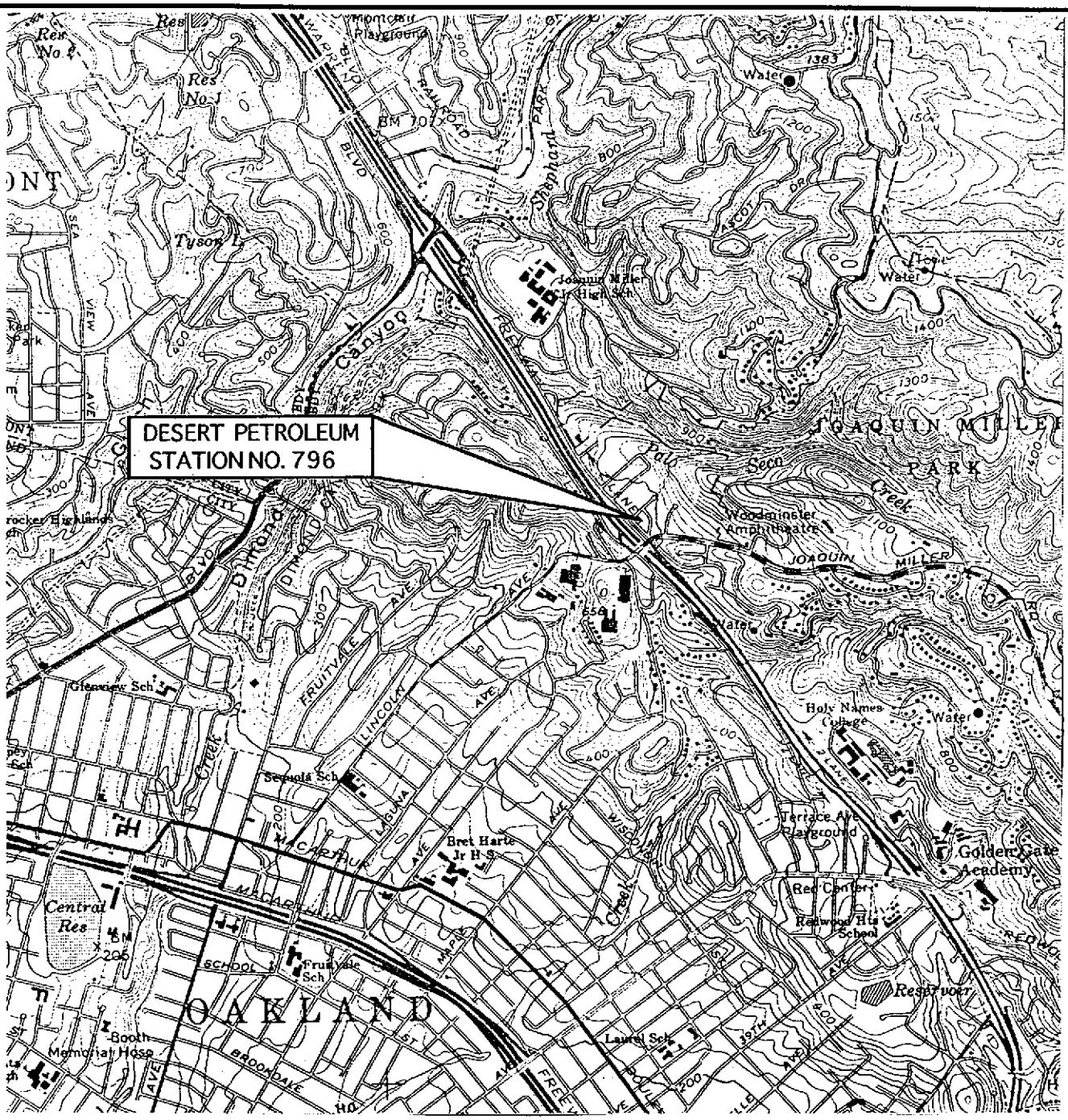
and RS-4, and have decreased slightly in well RS-3 since the previous quarterly sampling in November, 1994. TPH as motor oil was not detected in the samples from wells RS-1 and RS-4.

4.0 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; also, if applicable, other local regulations.

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

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. No other warranty, expressed or implied, is made.



SCALE 1:24 000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

FROM U.S.G.S. 7.5' TOPOGRAPHIC QUADRANGLE "OAKLAND EAST, CALIFORNIA, " 1959, PHOTOREVISED 1980

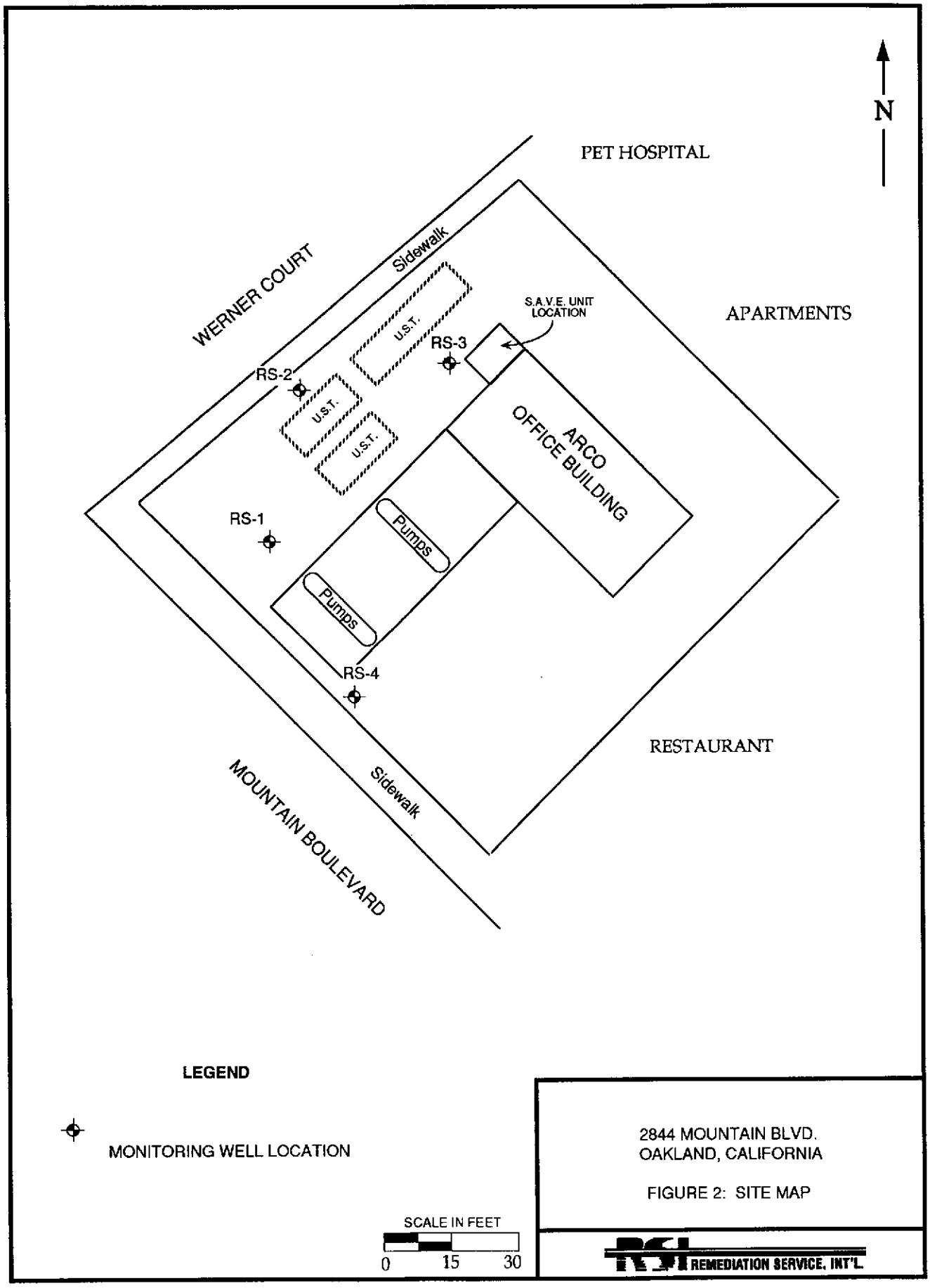
N

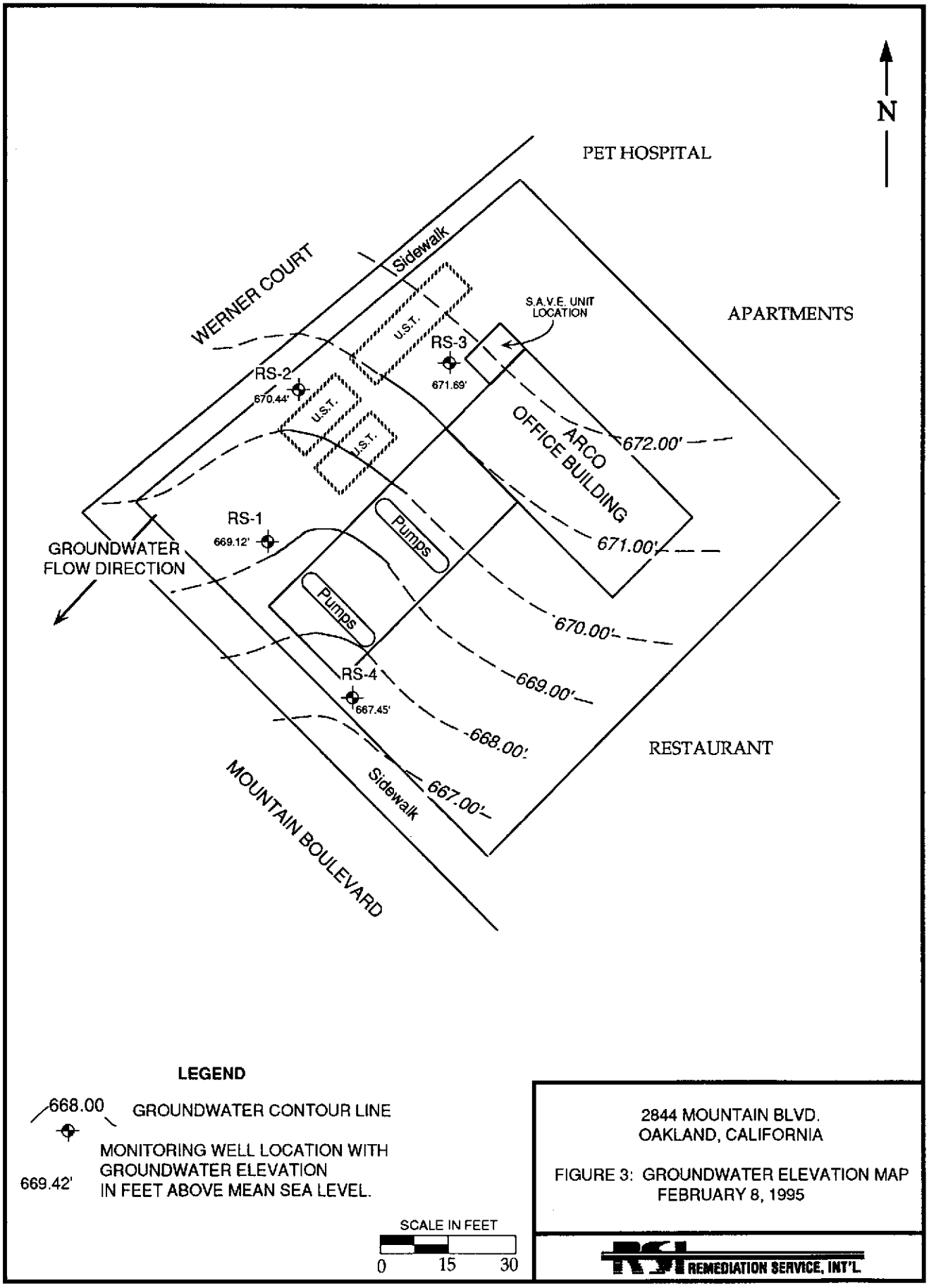
DESERT PETROLEUM, INC.

DESERT PETROLEUM STATION #796
2844 MOUNTAIN BLVD.
OAKLAND, CA

FIGURE 1: LOCATION MAP

RSI - REMEDIATION SERVICE, INT'L


N
PET HOSPITAL
WERNER COURT
Sidewalk
S.A.V.E. UNIT LOCATION
APARTMENTS
U.S.T.
U.S.T.
U.S.T.
RS-3
RS-2
ARCO OFFICE BUILDING
RS-1
Pumps
Pumps
RS-4
RESTAURANT
Sidewalk
MOUNTAIN BOULEVARD
LEGEND
MONITORING WELL LOCATION
SCALE IN FEET
0
15
30
2844 MOUNTAIN BLVD.
OAKLAND, CALIFORNIA
FIGURE 2: SITE MAP
REMEDIATION SERVICE, INT'L.



LEGEND

668.00 GROUNDWATER CONTOUR LINE

MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.

669.42'

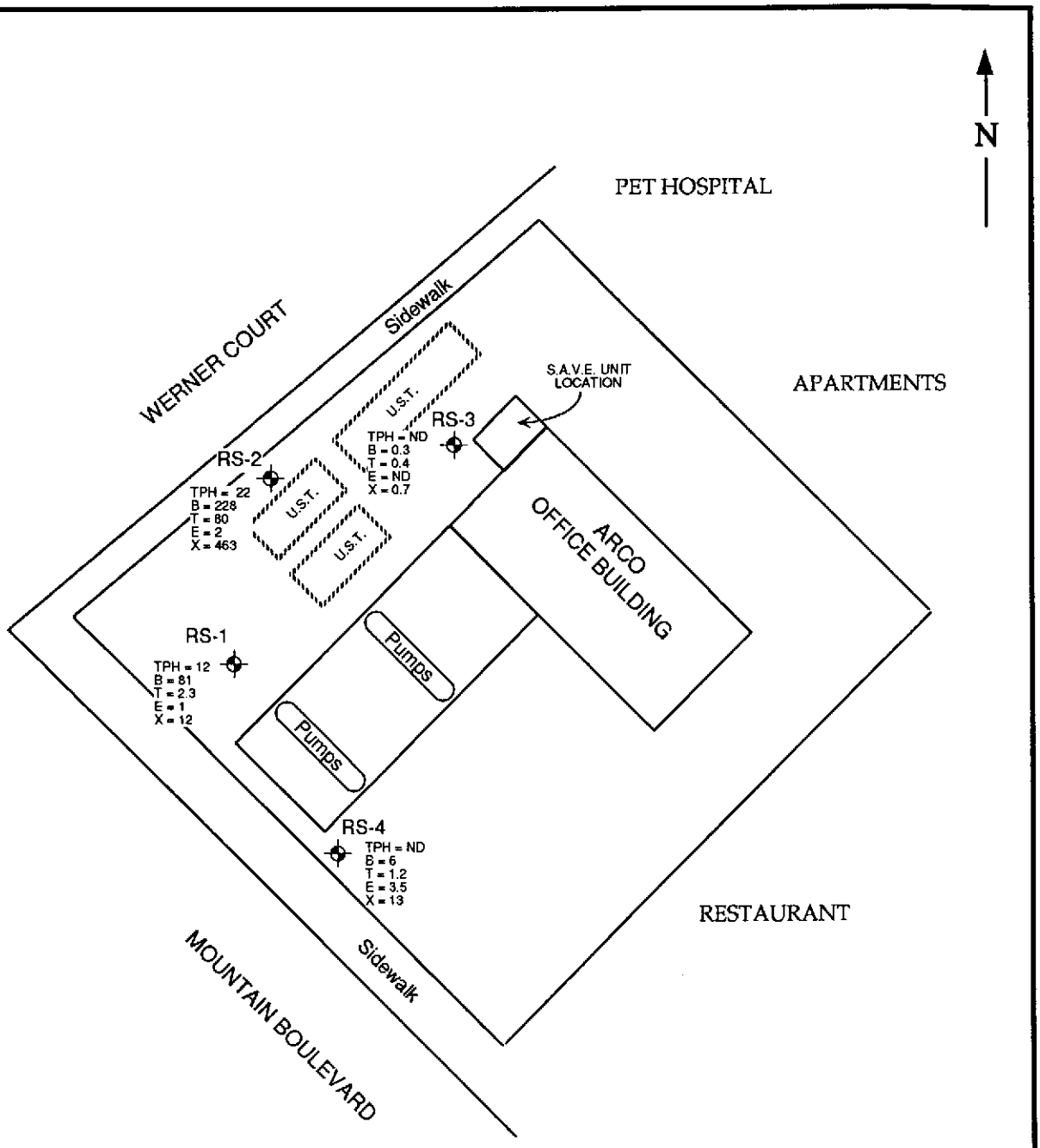
SCALE IN FEET

0 15 30

2844 MOUNTAIN BLVD.
OAKLAND, CALIFORNIA

FIGURE 3: GROUNDWATER ELEVATION MAP
FEBRUARY 8, 1995

REMEDIATION SERVICE, INT'L



LEGEND

TPH = 13
B = 4.1
T = 0.7
E = 1.7
X = 7.9

GROUNDWATER MONITORING WELL LOCATION WITH GROUNDWATER ANALYTICAL RESULTS; TPH CONCENTRATIONS ARE IN mg/L, BTEX CONCENTRATIONS ARE IN µg/L.

SCALE IN FEET

0 15 30

2844 MOUNTAIN BLVD.
OAKLAND, CALIFORNIA

FIGURE 4: SITE MAP WITH GROUNDWATER ANALYTICAL RESULTS
FEBRUARY 8, 1995

REMEDIATION SERVICE, INT'L

TABLE 1
GROUNDWATER ELEVATION DATA

2844 MOUNTAIN BLVD.
OAKLAND, CA

Measurements are in feet.

Well	Date Measured	Depth to Water*	Well Head Elevation**	Water Table Elevation**	Change In Elevation
RS-1	5/90	7.20	689.25	682.05	
	5/91	8.35		680.90	-1.15
	10/91	10.22	689.17	678.95	—
	1/92	8.06		681.11	2.16
	1/93	5.30		683.87	2.76
	8/93	8.56		680.61	-3.26
	11/93	8.44		680.73	0.12
	1/94	6.88		682.29	1.56
	5/94	7.87	675.63	667.76	—
	8/94	16.28		659.35	-8.41
	11/94	8.02		667.61	8.26
	2/95	6.51		669.12	1.51
RS-2	5/90	7.06	689.00	681.94	
	5/91	7.14		681.86	-0.08
	10/91	8.84	688.89	680.05	—
	1/92	7.34		681.55	1.50
	1/93	4.10		684.79	3.24
	8/93	7.32		681.57	-3.22
	11/93	7.34		681.55	-0.02
	1/94	5.52		683.37	1.82
	5/94	6.40	675.25	668.85	—
	8/94	22.11		653.14	-15.71
	11/94	9.82		665.43	12.29
	2/95	4.81		670.44	5.01
RS-3	5/90	6.00	690.00	684.00	
	5/91	6.76		683.24	-0.76
	10/91	8.98		681.02	-2.22
	1/92	6.81		683.19	2.17
	1/93	4.05		685.95	2.76
	8/93	7.19		682.81	-3.14
	11/93	7.12		682.88	0.07
	1/94	5.42		684.58	1.70
	5/94	5.78	676.20	670.42	—
	8/94	5.86		670.34	-0.08
	11/94	5.08		671.12	0.78
	2/95	4.51		671.69	0.57
RS-4	5/90	8.34	689.06	680.72	
	5/91	9.50		679.56	-1.16
	10/91	10.82	689.10	678.28	—
	1/92	9.31		679.79	1.51
	1/93	6.89		682.21	2.42
	8/93	9.68		679.42	-2.79
	11/93	9.83		679.27	-0.15
	1/94	8.17		680.93	1.66
	5/94	8.69	675.38	666.69	—
	8/94	9.04		666.34	-0.35
	11/94	8.00		667.38	1.04
	2/95	7.93		667.45	0.07

*Depth of water measured from top of well cover.
**Elevations are in feet above mean sea level.
Well Head Elevations surveyed 5/94 to City of Oakland Bench Mark #2804,
Bench Mark elevation = 676.08', based on USGS Sea Level Datum 1929.

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TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

2844 MOUNTAIN BLVD.
OAKLAND, CA

TPH analytical results are in mg/L (parts per million)
BTEX analytical results are in µg/L (parts per billion).

WELL #	DATE SAMPLED	TPH GASOLINE	TPH MOTOR OIL	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES
RS-1	5/90	2.7	NA	370	420	40	320
	5/91	1.3	NA	580	130	62	240
	10/91	1.1	NA	140	100	45	210
	1/92	1.7	NA	9.9	31	9.7	170
	1/93	3.7	NA	650	9.2	51	170
	8/93	0.9	NA	14	0.6	2.1	7.8
	11/93	1.4	NA	9.6	ND	0.9	4.9
	1/94	4.2	NA	95	3.1	58	130
	5/94	7.5	NA	270	11	37	96
	8/94	0.13	NA	12	0.5	2.6	4.7
	11/94	0.27	ND	4.7	0.7	0.6	15
2-8-95	2/95	12	ND	81	2.3	1	12
RS-2	5/90	23	NA	7,200	4,800	300	3,300
	5/91	26	NA	14,000	1,800	750	2,900
	10/91	13	NA	4,300	910	300	2,300
	1/92	8.3	NA	1,800	920	140	1,700
	1/93	41	NA	7,000	210	1,200	4,200
	8/93	19	NA	5,300	62	810	1,600
	11/93	9.3	NA	2,400	3.9	46	800
	1/94	30	NA	4,900	ND	880	2,600
	5/94	120	NA	3,300	330	ND	2,200
	8/94	0.51	NA	7.3	3.8	3.5	32
	11/94	0.62	NA	6.6	3.9	1.1	47
	2/95	22	NA	228	80	2	463
RS-3	5/90	0.33	NA	2	1	1	150
	5/91	ND	NA	0.4	ND	0.8	8.2
	10/91	ND	NA	ND	ND	ND	ND
	1/92	ND	NA	2.2	7.2	0.6	3.6
	1/93	ND	NA	ND	ND	ND	ND
	8/93	ND	NA	30	6	2.4	5
	11/93	ND	NA	4.8	0.4	0.6	1.9
	1/94	0.33	NA	25	3.2	3.9	12
	5/94	0.67	NA	34	4	28	70
	8/94	ND	NA	ND	ND	ND	ND
	11/94	0.069	NA	2.5	3.1	1	3.8
	2/95	ND	NA	0.3	0.4	ND	0.7
RS-4	5/90	0.44	NA	9	11	9	49
	5/91	ND	NA	8	4	3	5
	10/91	0.83	NA	280	120	24	170
	1/92	0.62	NA	34	8.3	2.1	21
	1/93	0.15	NA	32	1.7	5.8	13
	8/93	ND	NA	0.9	0.7	ND	0.3
	11/93	ND	NA	ND	ND	ND	ND
	1/94	ND	NA	1.7	ND	0.81	2.2
	5/94	ND	NA	ND	ND	ND	0.7
	8/94	0.42	NA	6.5	4.1	1.9	40
	11/94	0.13	ND	4.1	0.7	1.7	7.9
	2/95	ND	ND	6	1.2	3.5	13
Title 22 CCR MCL		—	—	1	150	700	1,750

TPH = Total petroleum hydrocarbons (gasoline)
ND = Not detected above minimum detection levels.

RSI REMEDIATION SERVICE, INT'L.

WATER SAMPLE LOG

DATE: 2/8/95

LOCATION: 2844 Mountain Blvd., Oakland, CA

WELL NUMBER: RS-1

WEATHER CONDITIONS: Partly cloudy, cool

FIELD OBSERVATIONS: Pump in well.
Purged well until dry.

TOTAL DEPTH OF WELL: 31.50 feet
DEPTH TO FREE PRODUCT: NONE
DEPTH TO WATER: 6.51 feet
DEPTHS MEASURED FROM: Top of well casing, north side.

CASING DIAMETER: 4 inches
ONE WELL VOLUME = 30.6 gallons
PURGING METHOD: Rediflo pump

WELL PURGING DATA

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments
1:05		7.92	66.9	0.86	Cloudy, no odor
1:10		7.55	68.5	0.84	Cloudy, no odor
1:13		7.63	68.0	0.84	Cloudy, no odor
1:18		7.70	68.1	0.85	Cloudy, no odor
1:22	25	7.76	68.3	0.84	Cloudy, no odor
	Dry				

TOTAL DISCHARGE: 25 gallons
WELL VOLUMES REMOVED: 0.8

TIME SAMPLE COLLECTED: 4:35 PM
DEPTH TO WATER AT TIME OF SAMPLE: 7.17 feet
PERCENT RECHARGE: 97
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear, no odor.
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 x 40 ML VOA's, 2 x 1 L. Amber bottle
SAMPLE TRANSPORTED TO: Holguin, Fahan & Associates, Inc.

SAMPLED BY: R. Pilat

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WATER SAMPLE LOG

DATE: 2/8/95

LOCATION: 2844 Mountain Blvd., Oakland, CA

WELL NUMBER: RS-2

WEATHER CONDITIONS: Partly cloudy, cool

FIELD OBSERVATIONS: Pump in well.
Purged well until dry.

TOTAL DEPTH OF WELL: 24.50 feet
DEPTH TO FREE PRODUCT: NONE
DEPTH TO WATER: 4.81 feet
DEPTHS MEASURED FROM: Top of well casing, north side.

CASING DIAMETER: 4 inches
ONE WELL VOLUME = 24.1 gallons
PURGING METHOD: Rediflo pump

WELL PURGING DATA

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments
1:35		7.64	68.6	0.93	Clear, no odor
1:38		7.40	66.5	0.87	Clear, no odor
1:42		7.21	67.5	0.86	Clear, no odor
1:46	25	7.30	67.2	0.87	Clear, no odor
	Dry				

TOTAL DISCHARGE: 25 gallons
WELL VOLUMES REMOVED: 1.0

TIME SAMPLE COLLECTED: 4:15 PM
DEPTH TO WATER AT TIME OF SAMPLE: 14.00 feet
PERCENT RECHARGE: 53
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear, no odor.
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 x 40 ML VOA's
SAMPLE TRANSPORTED TO: Holguin, Fahan & Associates, Inc.

SAMPLED BY: R. Pilat

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WATER SAMPLE LOG

DATE: 2/8/95

LOCATION: 2844 Mountain Blvd., Oakland, CA

WELL NUMBER: **RS-3**

WEATHER CONDITIONS: Partly cloudy, cool

FIELD OBSERVATIONS: No pump in well.
Purged well until dry.

TOTAL DEPTH OF WELL: 24.40 feet
DEPTH TO FREE PRODUCT: NONE
DEPTH TO WATER: 4.51 feet
DEPTHS MEASURED FROM: Top of well casing, north side.

CASING DIAMETER: 4 inches
ONE WELL VOLUME = 24.3 gallons
PURGING METHOD: Rediflo pump

WELL PURGING DATA

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments
2:05		7.17	67.2	0.79	Clear, no odor
2:10		7.03	64.5	0.72	Clear, no odor
2:15	30	6.99	65.2	0.75	Clear, no odor
	Dry				

TOTAL DISCHARGE: 30 gallons
WELL VOLUMES REMOVED: 1.2

TIME SAMPLE COLLECTED: 4:30 PM
DEPTH TO WATER AT TIME OF SAMPLE: 5.05 feet
PERCENT RECHARGE: 97
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear, no odor.
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 x 40 ML VOA's
SAMPLE TRANSPORTED TO: Holguin, Fahan & Associates, Inc.

SAMPLED BY: R. Pilat

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WATER SAMPLE LOG

DATE: 2/8/95

LOCATION: 2844 Mountain Blvd., Oakland, CA

WELL NUMBER: **RS-4**

WEATHER CONDITIONS: Slight drizzle

FIELD OBSERVATIONS: No pump in well.
Purged well until dry.

TOTAL DEPTH OF WELL: 25.96 feet
CASING DIAMETER: 4 inches
DEPTH TO FREE PRODUCT: NONE
ONE WELL VOLUME = 22.1 gallons
DEPTH TO WATER: 7.93 feet
PURGING METHOD: Rediflo pump
DEPTHS MEASURED FROM: Top of well casing, north side.

WELL PURGING DATA

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments
12:35		8.10	63.1	13.30	Clear, no odor
12:40		7.94	65.6	11.50	Silty, no odor
12:44	35	8.01	65.0	11.80	Silty, no odor
12:45	Dry				

TOTAL DISCHARGE: 35 gallons
WELL VOLUMES REMOVED: 1.6

TIME SAMPLE COLLECTED: 4:55 PM
DEPTH TO WATER AT TIME OF SAMPLE: 10.86 feet
PERCENT RECHARGE: 84
METHOD OF SAMPLE COLLECTION: Disposable Bailer
APPEARANCE OF SAMPLE: Clear, no odor.
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 x 40 ML VOA's
SAMPLE TRANSPORTED TO: Holguin, Fahan & Associates, Inc.

SAMPLED BY: R. Pilat

REMEDIATION SERVICE, INT'L.
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APPENDIX B

LABORATORY REPORTS
AND
CHAIN OF CUSTODY

HOLGUIN, FAHAN & ASSOCIATES, INC.
ENVIRONMENTAL LABORATORIES

143 South Figueroa Street • Ventura, California 93001 • (805) 652-0219 • FAX: (805) 652-0793

REPORT OF ANALYTICAL RESULTS

February 13, 1995

CLIENT:
Remedial Services International
Heather Davis
2060 Knoll Drive
Ventura, CA 93003

PROJECT: 796 Oakland
Desert Petroleum
Contract No.: N/A
PHONE:
(805) 644-5892

CONCENTRATION OF TOTAL PETROLEUM HYDROCARBONS (TPH) WITH BTEX DISTINCTION

Lab No.	Sample No.	Matrix	Dates Sampled, Received and Tested			Sampled By	Analyzed By	Units	CONSTITUENT							Percent Surrogate Recovery
									TPH-Gasoline *MRL*	TPH-Diesel *MRL*	Benzene *MRL*	Toluene *MRL*	Ethyl Benzene *MRL*	Total Xylenes *MRL*	TRPH *MRL*	
950619	RS 2	Water	2/8/95	2/10/95	2/10/95	Pilat	V. de Vera	mg/l	22		.228	.08	.002	.463		99%
									.5		*.0003*	*.0003*	*.0006*	*.0006*		
950620	RS 3	Water	2/8/95	2/10/95	2/10/95	Pilat	V. de Vera	mg/l	ND <MRL		.0003	.0004	ND	.0007		99%
									.5		*.0003*	*.0003*	*.0006*	*.0006*		
950621	RS 4	Water	2/8/95	2/10/95	2/10/95	Pilat	V. de Vera	mg/l	ND <MRL		.006	.0012	.0035	.013		84%
									.5		*.0003*	*.0003*	*.0006*	*.0006*		
950622	RS 1	Water	2/8/95	2/10/95	2/10/95	Pilat	V. de Vera	mg/l	12		.081	.0023	.001	.012		92%
									.5		*.0003*	*.0003*	*.0006*	*.0006*		

Extraction and Analyses Methods: EPA Method 5030 (Purge & Trap) DHS-TPH DHS-TPH _____ EPA 602 _____ EPA 418.1
MRL = Method Reporting Limit
ND = Not Detected at or above MRL
TRPH = Total Recoverable Petroleum Hydrocarbons
DHS-TPH = CAL-EPA TPH Draft Method
Lab Certification: CAELAP #1878; 4/30/97

Laboratory Manager: Vanessa J. de Vera

HOLGUIN, FAHAN & ASSOCIATES, INC.
ENVIRONMENTAL LABORATORIES
143 South Figueroa Street • Ventura, California (805) 652-0219 FAX (805) 652-0793

METHOD BLANK REPORT
REPORT OF ANALYTICAL RESULTS

Report Date: February 14, 1995
QC Batch ID: MBW2/10/95

Data Analyzed: 10-Feb-95
Analyzed By: V. de Vera
Analysis Method: 602/8015M

CONCENTRATION OF TOTAL PETROLEUM HYDROCARBONS (TPH) WITH BTEX DISTINCTION
in mg/kg (soil), mg/l (water), ppm v/v (air)

Lab No.	Client Sample No.	Matrix	TPH-Gasoline *MRL*	Benzene *MRL*	Toluene *MRL*	Ethyl Benzene *MRL*	Total Xylenes *MRL*
MBW2/10/95	Method Blank	Water	ND	ND	ND	ND	ND
			.05	*.0003*	*.0003*	*.0006*	*0.0006*

Volatile fuel hydrocarbons are quantitated against a gasoline standard. Hydrocarbons detected by this method range from C6 to C15. Analytes reported as ND were not present above the stated limit of detection.

MRL = Method Reporting Limit
ND = Not Detected at or above MRL
TPH = CAL-EPA TPH Draft Method
LAB CERTIFICATION: CAELAP #1878; 4/30/97

HOLGUIN, FAHAN & ASSOCIATES, INC.
ENVIRONMENTAL LABORATORIES
143 South Figueroa Street • Ventura, California (805) 652-0219 FAX (805) 652-0793

BTXSPK.XLS
QA/QC MATRIX SPIKE/MATRIX SPIKE DUPLICATE WORKSHEET
REPORT OF ANALYTICAL RESULTS

Sample ID:	RS-3	Date Extracted:	N/A
Lab No.:	950620	Date Analyzed:	10-Feb-95
Instrument ID:	HP 5890 GC-2	Matrix:	Water
Analysis Method:	EPA 602	Dilution Factor:	1

Matrix Spike Results

Compound	Sample Conc. (ppb)	Matrix Spike Conc. (ppb)	Spike Sol. Conc. (ppb)	Recovery (%)	Control Limits
MTBE	160.00	187	20	133	50-150
Benzene	0.33	18	20	89	42-158
Toluene	0.43	18	20	88	59-135
Ethylbenzene	0.00	17	20	86	61-124
m,p-Xylenes	0.53	18	20	86	61-124
o-Xylene	0.21	18	20	88	56-133

Matrix Spike Duplicate Results

Compound	Sample Conc. (ppb)	Matrix Spike Dup. Conc. (ppb)	Spike Sol. Conc. (ppb)	Recovery (%)	Control Limits
MTBE	160.00	189	20	144	50-150
Benzene	0.33	18	20	87	42-158
Toluene	0.43	18	20	86	59-135
Ethylbenzene	0.00	17	20	83	61-124
m,p-Xylenes	0.53	17	20	85	61-124
o-Xylene	0.21	18	20	87	56-133

Average Recovery & RPD Data

Compound	Spike Recovery	Matrix Spike Dup. Recovery	Average Recovery	% RPD	Control Limits
MTBE	133	144	138	8.5	<15
Benzene	89	87	88	2.5	<15
Toluene	88	86	87	2.7	<15
Ethylbenzene	86	83	85	3.4	<15
m,p-Xylenes	86	85	85	1.6	<15
o-Xylene	88	87	88	1.9	<15

RPD = Relative Percent Difference
TPH = CAL-EPA TPH Draft Method
LAB CERTIFICATION: CAELAP #1878; 4/30/97

Atkins Environmental

HELP LABS

2889 Bunsen Ave, Suite A Ventura, CA 93003

805-644-1044 Fax 805-644-0236

MCLAREN LAB
2550 EASTMAN AVE STE 1
VENTURA, CA 93003

Chain of Custody Record
Analytical Services Request

CLIENT NAME	ADDRESS	TELEPHONE/FAX NUMBER	METHOD OF SHIPMENT/SHIPPING DOCUMENT #
DP			CAL ONITE

PROJECT NAME/LOCATION	CLIENT PROJECT NO.	REQUESTED TURNAROUND TIME	HELP LABS QUOTE #	HELP LABS PROJECT #
796 OAKLAND		24 HOURS: ___ 10 DAY: X		
		5 DAY: ___		

PROJECT MANAGER	SAMPLER (S)	P.O. NO.
PLANT	PLANT	

SAMPLE IDENTIFICATION NO.	LAB NUMBER	DATE SAMPLED	TIME SAMPLED	CONTAINER #/TYPE	GRAB	COMPOSITE	SOIL	H2O	OTHER	524.2	624	8260	TPH9/MS	BTEX 8015/8020			MOTOR OIL	REMARKS
RS 2		2/8/95	4:15	3x VOA										X	X			950619
RS 3		"	4:30	"										X	X			620
RS 4		"	4:35	3 VOA + 2 LTR. AMB										X	X		X	621
RS 1		"	4:55	"				H						X	X		X	622

CONDITION OF SAMPLE:	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
TEMPERATURE UPON RECEIPT:			2/9/95	4:54
SEALS INTACT: YES / NO	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE 2/10/95	TIME 9:46
SAMPLE DISPOSAL:	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME

SEND INVOICE TO

MOTOR OIL SENT TO CARCO

PAGE ___ OF ___

Atkins Environmental

HELP LABS

2889 Bunsen Ave, Suite A Ventura, CA 93003
805-644-1044 Fax 805-644-0236

HOLGUIN - LAB
2550 EASTMAN AVE STE 1
VENTURA, CA 93003

Chain of Custody Record
Analytical Services Request

CLIENT NAME	ADDRESS	TELEPHONE/FAX NUMBER	METHOD OF SHIPMENT/SHIPPING DOCUMENT #
DP			CAL ONITE

PROJECT NAME/LOCATION	CLIENT PROJECT NO.	REQUESTED TURNAROUND TIME	HELP LABS QUOTE #	HELP LABS PROJECT #
746 OAKLAND		24 HOURS:_____ 10 DAY:_____ 5 DAY:_____		

PROJECT MANAGER	SAMPLER (S)	P.O. NO.
PILAT	PILAT	

SAMPLE IDENTIFICATION NO.	LAB NUMBER	DATE SAMPLED	TIME SAMPLED	CONTAINER #/TYPE	GRAB	COMPOSITE	SOIL	H2O	OTHER	524.2	624	8260	TPHg/MS	8015/8020			MOTOROIL	REMARKS
RS 2		2/8/95	4:15	3x VOA										X	X			
RS 3		"	4:30	"										X	X			
RS 4		"	4:35	3 VOA + 2 LTR AMB										X	X			X
RS 1		"	4:55	"										X	X			X

CONDITION OF SAMPLE:	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
TEMPERATURE UPON RECEIPT:			2/9/95	11:57
SEALS INTACT: YES / NO	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME
SAMPLE DISPOSAL:	RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE	TIME

SEND INVOICE TO:

PAGE _____ OF _____

Capco Analytical Services Incorporated (CAS)
1536 Eastman Avenue, Suite B
Ventura, CA. 93003
(805) 644-1095

Prepared For: R.S.I.
2060 Knoll Dr.
Ventura, CA 93003

February 17, 1995

ATTENTION: Heather Davis

Laboratory No: 950203
Date Received: 10-FEB-95
Project: 796 Oakland

Job No: B01753
Sampled By: Client
Sample ID: See Below

RESULTS

On February 10, 1995, two (2) samples were received for analysis by Capco Analytical Services Inc. The samples were identified and assigned the lab numbers listed below. This report consists of 1 page excluding the cover letter.

SAMPLE DESCRIPTION	CAS LAB NUMBER
RS4	95020301
RS1	95020302

Dan Farah

Dan A. Farah, Ph.D.
Director - Analytical Operations

Capco Analytical Services INC. (CAS)
1536 Eastman Avenue, Suite B
Ventura CA 93003
(805) 644-1095

Client: RSI
Lab ID: 950203
Matrix: Water

Analyst: SP
Date Received: 2/10/95

TOTAL PETROLEUM HYDROCARBONS
EPA METHOD 8015m

Compound	Concentration mg/L	Dilution Factor	PQL mg/L	Surrogate % Rec.
CAS Lab #: 95020301		**Date Extracted:**		
Sample ID: RS4		**Date Analyzed:**		**2/14/95**
TPH as Motor Oil	BQL	1.0	1	
Surrogate (n-Undecane)				81
CAS Lab #: 95020302		**Date Extracted:**		
Sample ID: RS1		**Date Analyzed:**		**2/14/95**
TPH as Motor Oil	BQL	1.0	1	
Surrogate (n-Undecane)				84
CAS Lab #: 950203-MB		**Date Extracted:**		
Sample ID: Method Blank		**Date Analyzed:**		**2/14/95**
TPH as Motor Oil	BQL	1.0	1	
Surrogate (n-Undecane)				53

Surrogate Control Limits: 42 - 142 %
PQL: Practical Quantitation Limit
BQL: Below Practical Quantitation Limit

Dan Farah

Dan Farah, Ph.D. - Department Supervisor

CAPCO Analytical Services, Inc.

HOLGUIN, FAHAN & ASSOCIATES, INC.

950203 - Page ___ of ___

ENVIRONMENTAL LABORATORIES

CHAIN-OF-CUSTODY

2550 Eastman Avenue, Unit #1 • Ventura, California 93003 • (805) 650-7750 • FAX: (805) 650-6810

Client Name: RSI

Project Name: 796 Oakland

Sampler's Name (print): R. Pilat

Sampler's Signature:

Date: 2/10/95

Client Sample #	Date Sampled	Time Sampled	Sample Matrix (soil, ground water, air, water)	Other Information (e.g., sampling location, depth, soil boring or MW #, etc.)	No. and Type of Containers	Analyses Requested: MOTOR OIL
RS4	2/8/95	4:35	Ground water		2 1ltr Amb	X
RS1	2/8/95	4:55	↓		↓	X

Send report & invoice to:
Remedial Services Int.
2060 Knoll Drive
Ventura, California 93003
Attn: Heather Davis
Phone #: 644-5892

SPECIAL INSTRUCTIONS
Please fax report 2/13/95 to Heather Davis

TURNAROUND TIME
per Vanessa
- [x] Normal
- [ ] 48-Hour
- [x] 24-Hour
- [ ] Other ____

REQUIRED DETECTION LIMITS
- [ ] Los Angeles County
- [ ] California LUFT
- [ ] Santa Barbara County
- [ ] SW-846
- [ ] Ventura County
- [ ] Other

SAMPLE RECEIPT

	Yes	No
Sample Seal Intact	[ ]	[ ]
Sample Condition Acceptable	[ ]	[ ]
Sample Temperature Appropriate	[ ]	[ ]

PRESERVATIVE ADDED?
- [ ] no
- [x] yes type: HCl

	Date/Time		Date/Time
Relinquished By: (Signature/Organization) Vanessa J. de Vera	2/10/95 10:12	Received By: (Signature/Organization)	2/10/95 10:12
Relinquished By: (Signature/Organization)	2/10/95 10:14	Received By: (Signature/Organization) Gena Ditmore	2/10/95 10:15
Relinquished By: (Signature/Organization)	Date/Time	Received For Laboratory By: (Signature/Organization)	Date/Time

Include Special Hazards Here:

(form updated 8/94)