

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

QUARTERLY MONITORING REPORT

for

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

SISTERED GEOLOGIO

MICHAEL E MULHERN No 1507 GERTIFIED ENGINEERING

GEOLOGIST

Michael Mulhern E.G. #1507

June 3, 1994

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring and gives an update of remedial activity for the real property located at the intersection of Mountain Boulevard and Werner Court at 2844 Mountain Boulevard in Oakland, Alameda County, California 94602 (Figure 1). The property is currently occupied by a retail gasoline station operating under the ARCO trade name. Site improvements include three underground storage tanks, two pump islands and an office/garage building. The tanks contain various grades of unleaded gasoline and diesel and have individual storage capacities of 3,000, 4,000, and 10,000 gallons.

Elevated concentrations of gasoline have been identified in both the soil and shallow groundwater at this site.

Active remediation of soil contamination began at the site in June, 1991 using an RSI S.A.V.E.TM vapor extraction system. Groundwater extraction and treatment was initiated in October, 1991. Remediation was suspended between February, 1992 and February, 1994; the S.A.V.E.TM System is now in operation ten hours a day at the site.

2.0 GROUNDWATER MONITORING

2.1 Groundwater Monitoring Procedures

On May 23, 1994, four groundwater wells at the site were measured for depth to water 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. After measuring, the wells were purged with a Rediflo pump and sampled. The pump and hoses were decontaminated between wells using a standard 3-bucket wash method with TSP. The wells were purged until 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).

After the wells had recharged a minimum of 80 percent, they were sampled using disposable bailers. The samples were sealed, labeled and placed on blue ice for transportation to Coast to Coast Analytical, a state certified laboratory. All samples were analyzed for TPH as gasoline using modified EPA method 8015M and for benzene, toluene, ethyl-benzene and xylenes (BTEX) using EPA method 8020. The laboratory reports are contained in Appendix B.

2.2 Groundwater Monitoring Results

As reported on Table 1, depth to groundwater on the site ranged from 5.78 to 8.69 feet below ground surface (bgs). Because the original survey datum for each of the

wells onsite had changed due to damage from heavy equipment and/or wellhead piping modifications, all wellheads were resurveyed this month to determine their present relative elevation. A copy of the survey report is found in Appendix C. Groundwater gradient was calculated to be between 0.049 and 0.057 across the site with groundwater flow in a southwesterly direction. A contour map of groundwater elevations is included as Figure 3.

Analytical results for the samples collected during this sampling episode and all previous monitoring episodes are summarized in Table 2. The official laboratory results and Chain-of-Custody documents are included in Appendix B. As reported on Table 2, hydrocarbon concentrations have increased in wells RS-1, RS-2 and RS-3 since the previous quarterly sampling in January, 1994. Hydrocarbon concentrations have decreased slightly in well RS-4.

3.0 REMEDIATION UPDATE

Vapor extraction and treatment began in June, 1991 with the installation of RSI's S.A.V.E.TM System. Groundwater extraction and treatment began in October, 1991. Groundwater was pumped from wells RS-1 and RS-2 and treated with the S.A.V.E.TM equipment. Due to noise complaints from neighboring residents, the system was operated only sporadically. Remedial operations were suspended on February 10, 1992, due to Desert Petroleum's filing bankruptcy. Up to that date, the system had removed a calculated 170.5 gallons of hydrocarbons by both vapor and groundwater extraction.

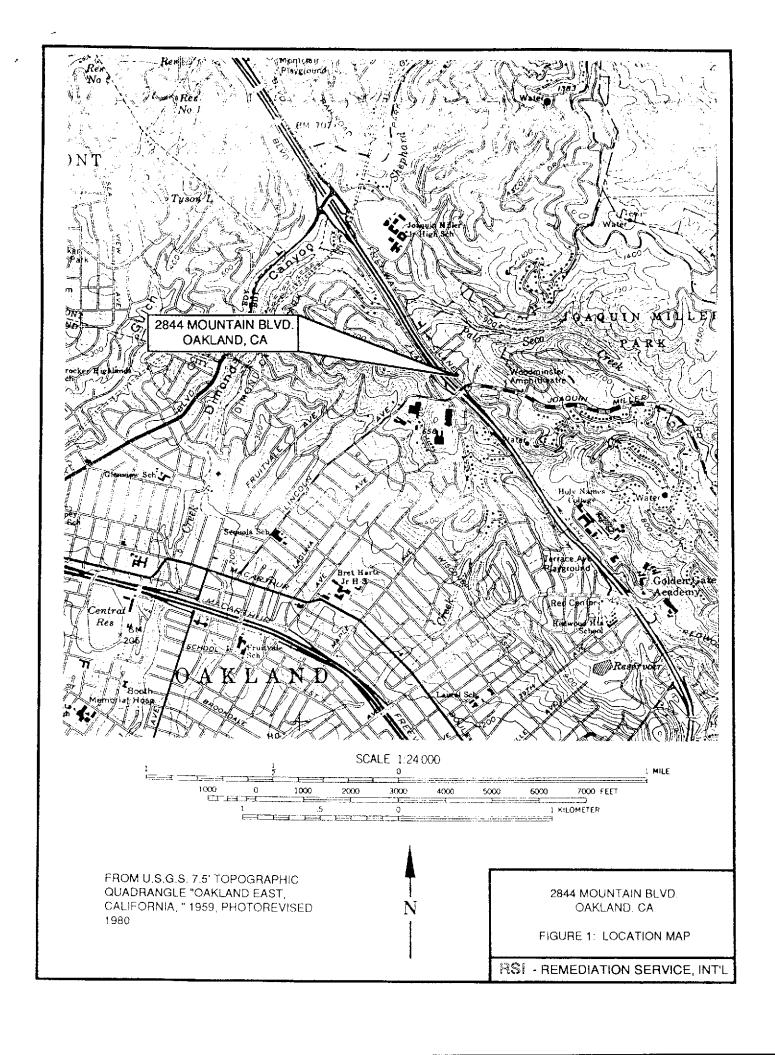
The S.A.V.E.™ System was restarted the February, 1994 for vapor extraction. Groundwater extraction will resume upon receipt of operating permits. The system operates only during daytime hours to comply with residential noise constraints and is maintained and monitored on a weekly basis. As of April, 1994, the system has removed 2.3 gallons of hydrocarbons from subsurface soils this year. The most recent vapor inlet sample from April, 1994 revealed a TPH concentration of 290 ppmv. An operation summary with TPH vapor concentrations for 1994 is included as Table 3. The location of the remediation equipment is included as Figure 4.

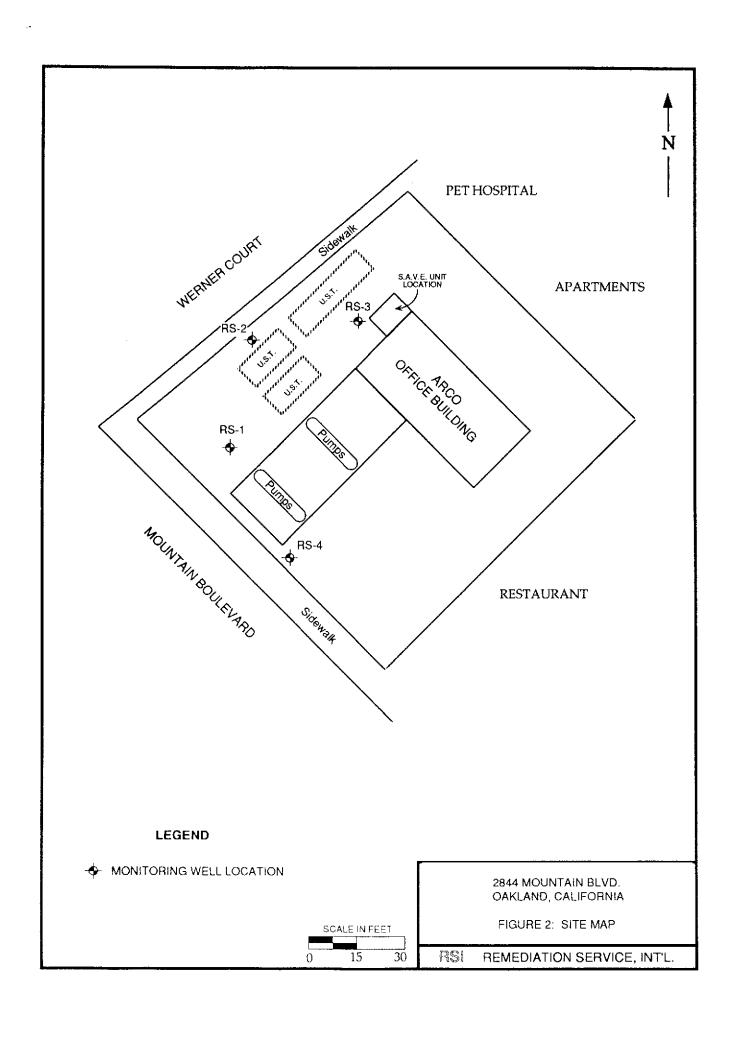
4.0 LIMITATIONS

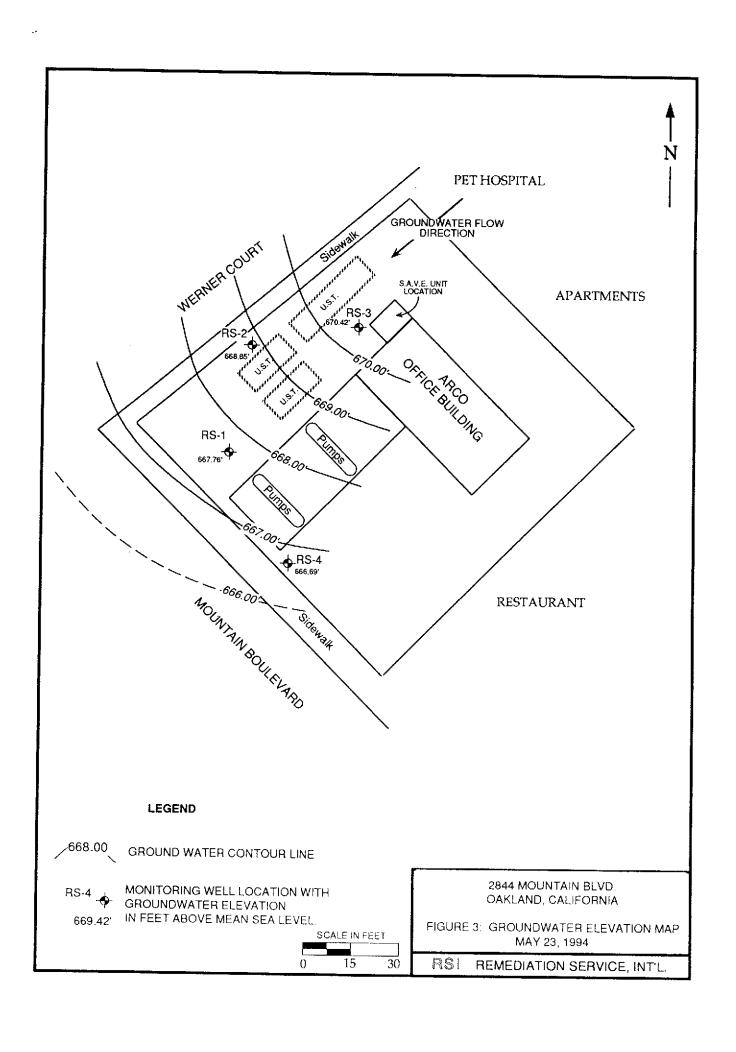
The discussion, conclusion and any recommendations presented in this report are based on the professional performance of the personnel who conducted the investigations, the observations of the field personnel, the results of laboratory analyses performed by a state certified laboratory, any referenced 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 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. No other warranty, expressed or implied, is made.







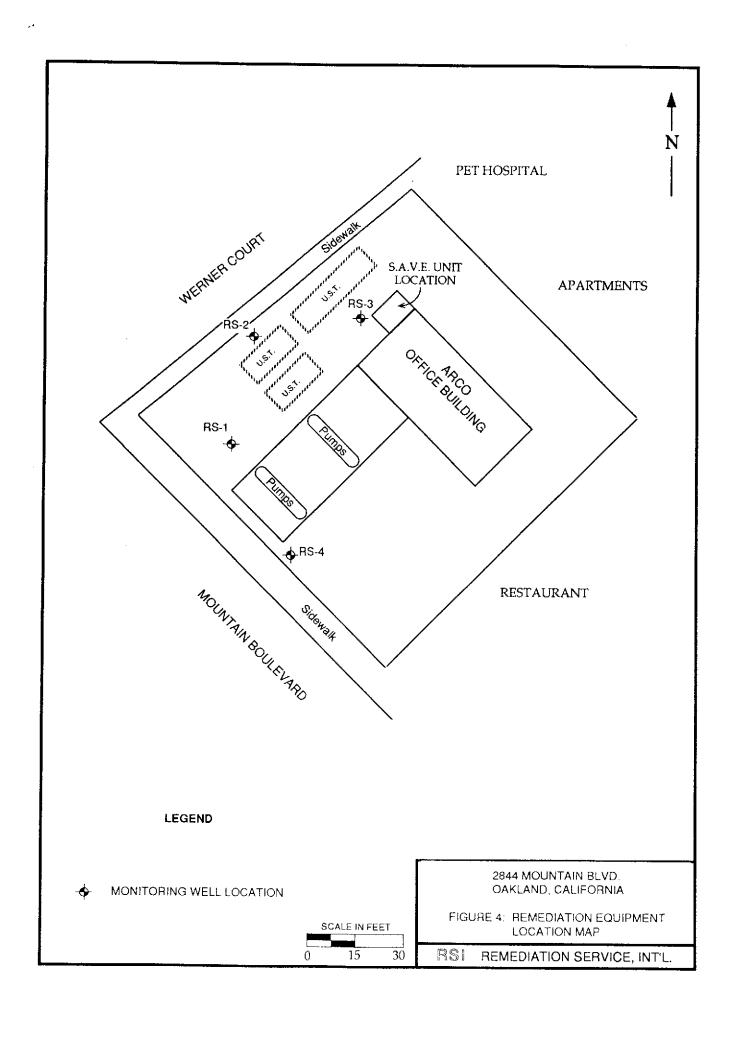


TABLE 1 GROUNDWATER ELEVATION DATA

2844 MOUNTAIN BLVD. OAKLAND, CA

Measurements are in feet.

	Date	Depth to	Well Head	Water Table	Change in
Well	Measured	Water*	Elevation**	Elevation**	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	
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	
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	
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	

^{*}Depth of water measured from top of well cover.

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.



^{**}Elevations are in feet above mean sea level.

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

2844 MOUNTAIN BLVD. OAKLAND, CA

Results are in μ g/L (parts per billion).

	DATE				ETHYL-	TOTAL
WELL#	SAMPLED	TPH	BENZENE	TOLUENE	BENZENE	XYLENES
RS-1	5/90	2,700	370	420	40	320
	5/91	1,300	580	130	62	240
	10/91	1,100	140	100	45	210
	1/92	1,700	9.9	31	9.7	170
	1/93	3,700	650	9.2	51	170
	8/93	900	14	0.6	2.1	7.8
	11/93	1,400	9.6	ND	0.9	4.9
	1/94	4,200	/ 95 /	3.1	58	130
	5/94	7,590	270 /	11	37	96
RS-2	5/90	23,000	7,200	4,800	300	3,300
	5/91	26,000	14,000	1,800	750	2,900
	10/91	13,000	4,300	910	300	2,300
	1/92	8,300	1,800	920	140	1,700
	1/93	41,000	7,000	210	1,200	4,200
	8/93	19,000	5,300	62	810	1,600
	11/93	9,300	2,400	3.9	46	800
	1/94	30,000	/ 4,900 /	ND	880	2,600
	5/94	120,000	′ 3,300 ∕	330	ND	2,200
RS-3	5/90	330	2	1	1	150
	5/91	ND	0.4	ND	0.8	8.2
	10/91	ND	ND	ND	ND	ND
	1/92	ND	2.2	7.2	0.6	3.6
	1/93	ND	ND	ND	ND	ND
	8/93	ND	30	6	2.4	5
	11/93	ND	4.8	0.4	0.6	1.9
	1/94	330	25	3.2	3.9	12
	5/94	670/	34 🗸	4	28	70
RS-4	5/90	440	9	1.1	9	49
	5/91	ND	8	4	3	5
	10/91	830	280	120	24	170
	1/92	620	34	8.3	2.1	21
	1/93	150	32	1.7	5.8	13
	8/93	ND	0.9	0.7	ND	0.3
	11/93	ND	ND	ND	ND	ND
	1/94	ND	1.7	ND	0.81	2.2
	5/94	ND /	ND /	ND	ND	0.7

TPH = Total petroleum hydrocarbons (gasoline)

ND = Not detected above minimum detection levels.



LOCATION:	2844 Mounta	in Blvd., Oak	dand, CA		DATE:	5/23/94	
WELL NUM	BER:	RS-1			-		
WEATHER C	ONDITIONS:	Sunny, war	m				
				tion. Remed	liation system intac	ot.	
			ırge.				
TOTAL DEP	TH OF WELL:	31.50	feet	CASING DIAM	METER:	4	inches
DEPTH TO F	REE PRODUCT:	NONE		ONE WELL V	OLUME =	28.9	gallons
					THOD: Rec		
DEPTHS ME	ASURED FROM	M:	Top of well	casing, north	h side.		
			WELL PUI	RGING DAT	1	· 	
				Specific			
	Discharge			Conductance	Co	mments	
Time	(gallons)	рH	Temp in F.	(µmhos/cm)	1	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
9:58	2.9	6.28	72.4	0.69	Grey, HC order		
10:00	8.6	5.70	71.6	0.67	Lt. brown, slt. o		
10:02	14.3	5.56	71,8	0.67	Lt. brown, slt. o		
10:04	20.1	5.66	71.9	0.67	Lt. brown, slt. o		
10:06	25.8	5.62	71.7	0.67	Lt. brown, slt. o	odor.	
10:08	37.3	5.59	71.4	0.67	Lt. brown, slt. o		
11:30	39.2	5.57	70.9	0.67	Lt. brown, slt. o	odor.	
11:33	44.9	5.58	71.1	0.67	Lt. brown, slt. o	odor.	
11:36	50.5	5.59	71.0	0.67	Lt. brown, slt. o	odor.	
TOTAL DISC	HARGE:	50.5	gallons	WELL VOLUM	MES REMOVED:	1.7	
TIME SAMPL	E COLLECTE	D:	2:12 PM				
	VATER AT TIME				PERCENT RECHAR	GE:	93
	SAMPLE COL						
APPEARANC	DE OF SAMPL	Light brown	n, slight odd	or present.			
AMOUNT AN	ID SIZE OF SA	MPLE CONTA	AINERS:	4 x 40 ML V	OA's		
SAMPLE TRA	ANSPORTED 1	ГО:	Coast to C	oast Analytic	cal		
SAMPLED R	v .	1.1				DIATION PERMIC	F INT'

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DATE: 5/23/94 LOCATION: 2844 Mountain Blvd., Oakland, CA							
	BER:						
	ONDITIONS; _ ERVATIONS; _		good condi	tion. Remedi	iation system intact.		
DEPTH TO F	REE PRODUCT	: NONE 6.40	feet	ONE WELL VE PURGING MET	METER: OLUME = 22. THOD: Rediflo puntside.	2 gallons	
	··-		WELL PUI	RGING DATA	Δ	· · · · · · · · · · · · · · · · · · ·	
	Discharge			Specific Conductance		s	
Time	(gallons)	pH		(µmhos/cm)			
8.54 8:56	4.3 12.8	4.97	72.2	0.87	Clear, slt. order		
8:59	25.5	5.13 5.07	71.8	0.86	Lt. brown, sit. odor.		
9:01	34.1	5.15	71.4 71.3	0.86 0.85	Lt. brown, slt. odor.		
10:53	36.9	5.17	71.3	0.85	Lt. brown, slt. odor. Lt. brown, slt. odor.		
10:54	39.8	5.14	71.1	0.84	Lt. brown, slt. odor.		
10:55	42.7	5.18	70.8	0.85	Lt. brown, slt. odor.	-	
10:56	45.5	5.19	71.0	0.84	Lt. brown, slt. odor.		
10:58	51.2	5.19	70.9	0.84	Lt. brown, slt. odor.		
	HARGE:		gallons	WELL VOLUN	MES REMOVED: 2.	3	
				feet	PERCENT RECHARGE:	50	
METHOD OF	SAMPLE COL	LECTION:	Disposable	Bailer	· · · · · · · · · · · · · · · · · · ·		
	E OF SAMPL						
AMOUNT AN	D SIZE OF SA	MPLE CONTA	VINERS:	4 x 40 ML VC	DA's		
	ANSPORTED			· · · · · · · · · · · · · · · · · · ·		,	
					<u> </u>		
SAMPLED B	Y:	JJ			書屋 三番 REMEDIATION S	ERVICE, INT'L	

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LOCATION:	2844 Mounta	in Blvd., Oaki	and, CA			DATE: 5/23/94	
WELL NUMI		RS-3			-		
WEATHER C	ONDITIONS:	Sunny, warn	<u>n</u>				
FIELD OBSE	RVATIONS:	Well box in	good conditio	n.			
	_	Slow rechar	ge.				
TOTAL DEP	TH OF WELL:	24.4	0 feet	CASING DIAM	IETER:	4	inches
DEPTH TO FR	REE PRODUCT:	NONE		ONE WELL VO	DLUME =	22.8	gallons
DEPTH TO W	/ATER:	5.78	B feet		-	Rediflo pump	
	ASURED FROM			casing, north s			
	· · · · · · · · · · · · · · · · · · ·		WELL PUI	RGING DATA			
				Specific			1
	Discharge			Conductance		Comments	e of E
Time	(gallons)	рН	Temp in F.	(µmhos/cm)			
8:23		5.05	71.0	0.77	Clear,	slt. product order	7
8:27		4.48	70.8	0.79	Clear,	slt, product order	
8:31		4.61	70.2	0.74	Clear,	slt. product order	
8:34		4.52	70.4	0.80	Clear,	slt. product order	
8:35	41.3	5.73	69.9	0.85	Clear,	slt. product order	
10:30		5.64	70.1	0.81	Clear,	no product order	
10:32		5.64	70.2	0.79	Clear,	no product order	
10:35			70.0	0.77	Clear,	no product order	
10:38	64.3		69.8	0.77	Clear,	no product order	
TOTAL DISC	HARGE:	64.3	gallons	WELL VOLUM	ES REMO\	VED: 2.8	
	E COLLECTED:		1:55 PM				
	ATER AT TIME				PERCENT	RECHARGE:	98
METHOD OF	SAMPLE COLL	ECTION:	Disposable E	Bailer			
	E OF SAMPLE:						
AMOUNT AN	D SIZE OF SAM	IPLE CONTAIN	NERS:	4 x 40 ML VC	DA's		
	NSPORTED T						
				Γ		«ı	
SAMPLED BY	√.	.1.1		;	E 16	華 NEMEDIATION SERV	ACE INT'I

2060 KNOLL DR., SUITE 200, VENTURA, CA 93003 (805) 644-5892 = FAX (805) 654-0720

LOCATION:	2844 Mounta	in Blvd., Oak	dand, CA		DA	TE: <u>5/23/9</u>	4
WELL NUM	BER:	RS-4					
	ONDITIONS: ERVATIONS:		good condit	on.			
TOTAL DEPTH OF WELL: 25.96 feet CASING DIAMETER: 4 inches DEPTH TO FREE PRODUCT: NONE ONE WELL VOLUME = 21.1 gallons DEPTH TO WATER: 8.69 feet PURGING METHOD: Rediflo pump DEPTHS MEASURED FROM: Top of well casing, north side.							
			WELL PU	RGING DATA	A	***	
Time	Discharge (gallons)	рН	Temp in F.	Specific Conductance (µmhos/cm)		Comment	S
9:28	1.5	5.56	73.4	0.72	Clear,	trong preduct	order
9:30	7.3	5.66	72.6	0.69		trong product	
9:31	8.7	5.58	72.5	0.68		trong product	
9:47	32	5.60	72.1	0.68		lt, product or	
11:13	35	5.62	70.9	0.68		lt. product or	
11:15	41.2	5.64	71.6	0.69		it. product or	
11:16	44.2	5.66	71.5	0.68		It. product or	
11:17	47.3	5.65	71.7	0.68		It, product or	
TOTAL DISC	HARGE: E COLLECTE		71.6 gallons 2:25 PM	WELL VOLUM		It. product ord	
DEPTH TO W METHOD OF	VATER AT TIM SAMPLE COL CE OF SAMPL	E OF SAMPLE LECTION:	13.20 Disposable	Bailer	PERCENT RE	· · ·	74
AMOUNT AN	ID SIZE OF SA	MPLE CONTA	NINERS:	4 x 40 ML VC)A's		
SAMPLE TRA	ANSPORTED	ΤΟ:	Coast to C	oast Analytic			

SAMPLED BY: _____JJ

E TEREMEDIATION SERVICE. INT'L.

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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.

2060 Knoll Drive, Suite 200

Ventura, CA 93003

Lab Number : JK-1652-1

Project : DP796

Analyzed : 05/27/94

Analyzed by: CB

Method : EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED	RECEIVED
RS-1	Groundwater	John Jenser	1	05/23/94	05/23/94
CONSTITUENT		(CAS RN)	*PQL μg/L	RESULT μg/L	NOTE
BTEX + TPH (Gasoline)					1,2
Benzene			10.	270.	
Toluene			10.	11.	
Ethylbenzene			10.	37.	
Xylenes			10.	96. /	
Total Petroleum Hydrocarbons (Gasoline	∋)		1000.	7500 🗸	
Percent Surrogate Recovery				105.	

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)
- (2) Elevated PQLs due to sample dilution.

05/31/94 GC#2\527B312 DT/mcca3(dw)/jst W-BTX-052794 Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

CLIENT: Rick Pilat

R.S.I.

2060 Knoll Drive, Suite 200

Ventura, CA 93003

Lab Number: JK-1652-2

: DP796 Project

Analyzed : 05/31/94

Analyzed by: CB

: EPA 8020/8015M Method

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED	RECEIVED
RS-2	Groundwater	John Jensen		05/23/94	05/23/94
CONSTITUENT		(CAS RN)	*PQL µg/L	RESULT μg/L	NOTE
BTEX + TPH (Gasoline)	,				1,2
Benzene			300.	3300.	
Toluene			300.	330.	
Ethylbenzene			300.	ND	
Xylenes			300.	2200.	a.
Total Petroleum Hydrocarbons (Gaso	line)		30000.	120000. 🦯	
Percent Surrogate Recovery				104.	

San Jose Lab Certifications: CAELAP #1204

- (1) EXTRACTED by EPA 5030 (purge-and-trap)
- (2) Elevated PQLs due to sample dilution.

05/31/94 GC#2\531B306 DT/mcca3(dw)/jst W-BTX-053194

Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC.

Marine Dudley Torres Organics Manager

^{*}RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)



CLIENT: Rick Pilat R.S.I.

COAST-TO-COAST ANALYTICAL SERVICES, INC.

NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

Lab Number : JK-1652-3

Project : DE

: DP796

Analyzed

: 05/26/94

Analyzed by: CB

Method :

: EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED	RECEIVED
RS-3	Groundwater	John Jensen		05/23/94	05/23/94
CONSTITUENT		(CAS RN)	*PQL μg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)				ger ^{es}	1
Benzene			0.5	34.	
Toluene			0.5	4.0	
Ethylbenzene			0.5	28.	
Xylenes			0.5	70.	
Total Petroleum Hydrocarbons (Gasolin	ne)		50.	670.	
Percent Surrogate Recovery	•			102.	

San Jose Lab Certifications: CAELAP #1204

2060 Knoll Drive, Suite 200

Ventura, CA 93003

*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) EXTRACTED by EPA 5030 (purge-and-trap)

05/31/94 GC#2\526B319 DT/mcca3(dw)/jst W-BTX-052694 Respectfully submitted, COAST-TO-COAST ANALYTICAL SERVICES, INC.

Dudley Torres



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

CLIENT: Rick Pilat

R.S.I.

2060 Knoll Drive, Suite 200

Ventura, CA 93003

Lab Number: JK-1652-4

Project

: DP796

Analyzed : 05/27/94

Analyzed by: CB

Method

: EPA 8020/8015M

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED	RECEIVED
RS-4	Groundwater	John Jensen		05/23/94	05/23/94
CONSTITUENT		(CAS RN)	*PQL μg/L	RESULT µg/L	NOTE
BTEX + TPH (Gasoline)					1
Benzene			0.5	ND -	
Toluene			0.5	ND	
Ethylbenzene			0.5	ND	
Xylenes			0.5	0.7 /	
Total Petroleum Hydrocarbons (Gasolin	e)		50.	ND /	
Percent Surrogate Recovery				106.	

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)

05/31/94 GC#2\527B311 DT/eta3(dw)/jst W-BTX-052694

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

QC Batch ID: W-BTX-052694

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/27/94

Analyzed by: CB

Method : EPA 8020/8015M

METHOD BLANK

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SA	MPLED DATE R	ECEIVED
METHOD BLANK	Aqueous				
CONSTITUENT		(CAS RN)	*PQL µg/L	RESULT μg/L	NOTE
BTEX + TPH (Gasoline)			-		1
Benzene			0.5	ND	
Toluene			0.5	ND	
Ethylbenzene			0.5	ND	
Xylenes			0.5	ND	
Total Petroleum Hydrocarbons (Ga	soline)		50.	ND	
Percent Surrogate Recovery	•			101.	

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)

05/31/94 GC#2\526B305A DT/eta3(dw)/jst JK1652-4

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

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NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

OC Batch ID: W-BTX-052694

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/27/94

Analyzed by: CB

Method

: EPA 8020/8015M

QC MATRIX SPIKE

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED BY		SAMPLED DATE RECEI	
MATRIX SPIKE	Aqueous					
CONSTITUENT		ORIGINAL RESULT	SPIKE AMOUNT	result µg/l	%REC	NOTE
BTEX + TPH (Gasoline)						1
Benzene		ND	10.	12.	120.	
Toluene		ND	10.	10.	100.	
Ethylbenzene		ND	10.	9.8	98.	
Xylenes		0.7	30.	32.	104.	
Total Petroleum Hydrocarbons (Gasolin	ne)	ND	250.	210.	84.	

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)

05/31/94 GC#2\526B322 DT/eta3(dw)/jst/mcc JK1652-4

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



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

QC Batch ID: W-BTX-052694

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/27/94

Analyzed by: CB

Method : EPA 8020/8015M

QC MATRIX SPIKE

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE RECEIVED			
MATRIX SPIKE DUPLICATE	Aqueous						
CONSTITUENT		ORIGINAL RESULT	SPIKE AMOUNT	RESULT µg/L	%REC	%DIFF	NOTE
BTEX + TPH (Gasoline)							1
Benzene		ND	10.	12.	120.	0.	
Toluene		ND	10.	10.	100.	0.	
Ethylbenzene		ND	10.	9.9	99.	1.	
Xylenes		0.7	30.	32.	104.	0.	
Total Petroleum Hydrocarbons (Gasoli	ne)	ND	250.	230.	92.	9.1	

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)

05/31/94 GC#2\526B323 DT/eta3(dw)/jst JK1652-4

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

Dudley Torres pr

Marine



NorCal Division (San Jose Laboratory) 2059 Junction Ave.

San Jose, CA 95131 (408) 955-9077

QC Batch ID: W-BTX-052694

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/27/94

Analyzed by: CB

Method

: EPA 8020/8015M

OC SPIKE REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED I	BY	SAMPLED DA	TE RECE	IVED
QC SPIKE	Aqueous					
CONSTITUENT		*PQL µg/L	SPIKE AMOUNT	RESULT μg/L	*REC	NOTE
BTEX + TPH (Gasoline)						1
Benzene		0.5	10.	12.	120.	
Toluene		0.5	10.	11.	110.	
Ethylbenzene		0.5	10.	10.	100.	
Xylenes		0.5	30.	33.	110.	
Total Petroleum Hydrocarbons (Gasol	.ine)	50.	250.	270.	108.	

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)

05/31/94 GC#2\526B306 DT/eta3(dw)/jst/mcc JK1652-4

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

Murrul
Dudley Torres
Organics Manager

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Air, Water & Hazardous Waste Sampling, Analysis & Consultation • Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories



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San Jose, CA 95131 (408) 955-9077

QC Batch ID: W-BTX-052694

CLIENT: Coast-to-Coast Analytical Services, Inc.

Analyzed : 05/27/94

Analyzed by: CB

Method : EPA 8020/8015M

QC SPIKE

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY		SAMPLED DATE RECEIVED			IVED
QC SPIKE DUPLICATE	Aqueous						'
CONSTITUENT		*PQL µg/L	SPIKE AMOUNT	RESULT µg/L	*REC	%DIFF	NOTE
BTEX + TPH (Gasoline)							1
Benzene		0.5	10.	12.	120.	0.	
Toluene		0.5	10.	11.	110.	0.	
Ethylbenzene		0.5	10.	10.	100.	0.	
Xylenes		0.5	30.	32.	107.	3.1	
Total Petroleum Hydrocarbons (Gasoline)	50.	250.	250.	100.	7.7	

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)

05/31/94 GC#2\526B307 DT/eta3(dw)/jst JK1652-4

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



FOR LAB

4765 Calle Quetzal 7726 Moller Rd.

2059 Junction Ave.

141 Suburban Road 2400 Cumberland Dr.

Camarillo, CA 93012 Indianapolis, IN 46268 San Jose, CA 95131

(805) 389-1353 (317) 875-5894 (408) 955-9077 (805) 547-3888 (219) 464-2389

FAX (805) 389-1438 FAX (317) 872-6189

FAX (408) 955-9078 FAX (805) 543-2685 FAX (219) 462-2953 Chain of Custody

Page / of //

Sludge/Soil/Solid

A/G - Air/Gas

Other

OT -

ا ۹ ۰	24	141 Suburban Road Sa 00 Cumberland Dr. County Road No. 5	an Luis Obispo, CA 93401 Valparaiso, IN 46383 Westbrook, ME 04092	 (805) 547-3888 (219) 464-2389 (207) 874-2400 	FAX (805) 543-2685 FAX (219) 462-2953 FAX (207) 775-4029		Page of _	
Cli	ent RSI		(Contact		Phone #44-58	72 F85654-0	7720
	dress 2600 KNOLL D	2 Str 200	City Ventur	a	State (A	· · · · · · · · · · · · · · · · · · ·	Zip 9.300-3	
	eject Name/Number DP 79	76				Project MG	RRICK PILAT	Ī
	(If different than above)		Address					1
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	Sample Description	Date/Time Coll'd Matri	# of Filt. ix Containers Pres. y/n	· ·	* Subject to Availal Analysis	pility	Remarks Lab II	d #
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	RS-4		111	1				14
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ONLY	Shipping Method S	hipping #	Received By	Date/Time /		ee Remarks)	* Matrix: DW + Drinking Water	
SE ON	West Consucs	Musen	XX Xbraham	02/23/040	Cold S	ealed Intact	WW - Wastewater GW - Groundwater SW - Surtace Water	
AB USE	REMARKS	a cussa parte	618) kub				IM - Impinger - FI - Filter - FP - Free Product	

APPENDIX C

MONITORING WELL ELEVATION SURVEY

Brian Kangas Foulk

May 25, 1994 BKF No. 945037

> Consulting Engineers 1990 N. California Blvd. Suite 250 Walnut Creek, CA 94596 510/937-6202 FAX 510/937-6260

Mr. Kevin Fritz Remediation Services Int'I. 2060 Knoll Dr. Suite 200 Ventura,Ca. 93003

Subject: Monitor Well Surveys- Oakland, San Leandro, San Jose.

Dear Mr. Fritz,

The wells for the sites above were surveyed for elevation by field methods using local bench marks tied to N.G.V.D. 1927 datum. The findings are as follows:

Site	Well No.	Elevation, North rim	Elevation, Top casing
15201 Washington	GX135A	20.36'	19.72'
San Leandro	GX135B	19.51'	19.04'
	GX135C	19.26'	18.81'
4035 Park Ave.	RS1	228,84'	228.15'
Oakland	RS2	227.82	227.19'
	RS4	196.37'	195.92'
	RS5	228.18'	227.65'
	RS6	227.93'	227.22'
And the second s			
/ 2844 Mountain	RS1	675.96'	675.63'
/ Oakland	RS2	675.78'	675.25'
/	RS3	676,66'	676.20'
The state of the s	RS4	675.81'	675.38'
5350 Monterey Rd	MW1	189.44'	189.02'
San Jose	MW4	190.51'	190.22'
	MW5	190.96'	190.71'
	MW6	190.01'	189.70'
	MW7	190.49'	189.87'
	MW8	190.95	190.77'
	RS9	189.33'	189.01'

Brian Kangas Foulk

If you have any questions please call.

Sincerely,

BRIAN KANGAS FOULK

Barry Williams

Supervisor of Surveys

Professional Land Surveyor #6711

Expires 6-30-96.

