REMEDIATION SERVICE, INT'L.

P.O. BOX 1601, OXNARD, CALIFORNIA 93032
(805) 644-5892 • FAX (805) 654-0720

91 OCT 30 PM 12:30

November 1, 1991

Mr. Gil Wister
Alameda County Health Care Services Agency
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

Subject: **QUARTERLY GROUND WATER MONITORING REPORT FOR DESERT PETROLEUM STATION # 796, 2844 MOUNTAIN BOULEVARD, OAKLAND, CALIFORNIA**

Dear Mr. Wister:

Remediation Service Int'l. (RSI) is pleased to submit the results of quarterly ground water monitoring at the above referenced site.

INTRODUCTION

This report presents the results of quarterly ground water monitoring for Desert Petroleum Station #796 located at 2844 Mountain Boulevard, Oakland, California (see Figure 1 - Site Location Map). The site 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 have storage capacities of 3,000, 4,000 and 10,000 gallons and contain premium unleaded, regular leaded and unleaded gasoline, respectively (see Figure 2 - Plot Plan). Soil contamination was originally identified during replacement of the product lines in March, 1989. Analytical results of soil samples collected from beneath the lines near the pump islands showed Total Petroleum Hydrocarbon as gasoline (TPH) concentrations to be less than 100 parts per million. However, a sample collected from the southern edge of the premium unleaded tank showed a TPH concentration of 8,400 ppm. In July, 1989, On-Site Technologies excavated contaminated soil from the southern end of the premium unleaded tank. Four ground water monitoring well, RS-1 through RS-4, were installed in May, 1990. See Figure 2 for monitoring well locations. Soil samples collected above the water table showed TPH concentrations from one to 240 ppm. TPH concentrations were detected in the ground water samples collected from all the wells, with the highest concentration (23 ppm) found in monitoring well RS-2.

GROUND WATER SAMPLING PROCEDURES AND RESULTS

On October 10, 1991, the depth to ground water was measured in all the monitoring wells to determine the ground water flow direction. Because the well covers had been reconstructed since the last sampling, all the wells were resurveyed. The surveyed elevations were measured to an accuracy of 0.01 feet and are referenced to an elevation of 690 feet above mean sea level for monitoring well RS-3. The measuring point for each well was the top of the well cover and the depth to ground water in all the wells was measured to an accuracy of 0.01 feet.

Based upon these measurements, the ground water elevation ranges from approximately 678 to 681 feet across the site. This reflects a drop in the ground water elevation of two to three feet across the site. The local ground water flow direction was determined to be generally toward the southwest. This is consistent with previously determined ground water flow directions. See Table 1 and Figure 3 for ground water elevation data and direction of ground water flow.

All the wells were checked for floating product prior to purging and sampling. No floating product was found. The wells were purged with a clean PVC bailer and new rope. The bailer was decontaminated between wells using a standard 3-bucket wash method. A minimum of three well volumes was purged from each well or until the well bailed dry. The purged water was monitored for temperature, conductivity and ph. These measurements along with all other pertinent data were recorded on Water Sample Logs (see Attachment 1). The purged water was placed in 55 gallon DOT drums and stored on site.

The wells were allowed to recharge to approximately 80 percent or more of the initial static water level and a sample was collected with a disposable bailer. The samples were collected into three 40-milliliter VOA vials which were labeled, placed on ice and transported, along with a trip blank to Anametrix Inc., a state certified laboratory.

The samples were tested for total petroleum hydrocarbons (TPH) as gasoline using EPA Method 5030 and benzene, toluene, ethylbenzene and total xylenes (BTEX) using modified EPA Method 8020.

Analytical results of the water samples from all the wells except RS-3 showed elevated concentrations of TPH (as gasoline) and BTEX compounds. As shown in Table 1, the concentrations have generally decreased in all the wells, except RS-4, since the last sampling episode. See Attachment 2 for Laboratory Report and Chain-of-Custody.

REMEDIATION PROGRESS

Vapor extraction began in June, 1991, with the installation of RSI's S.A.V.E. System. However, due to noise problems, the system was shut down in August and has since been in operation on a discontinuous basis. As of October 1, the system has operated a total of 288.3 hours and has extracted and treated 494,305 cubic feet of vapor. The calculated amount of product removed from the site since the beginning of remediation is 79.6 gallons.

79.6 gals product removed

The calculated amount of contaminant removed by the system is derived directly from the analytical data. Hydrocarbon concentrations were sampled as they exited the wells and were analyzed by a state certified laboratory. This method gives an accurate assessment of the concentrations of hydrocarbons being removed from the subsurface. These concentrations, in conjunction with various operational parameters, are used to evaluate the progress of the cleanup. See Attachment 3 for the S.A.V.E. System Performance Data. The Summary Table shows performance data for June and September, 1991, and Tables I through V contain the S.A.V.E. System monitoring data for September, 1991.

LIMITATIONS

The discussion and recommendation presented in this report are based on the following:

1. The professional performance of the personnel who conducted the investigations.

2. The observations of the field personnel.

3. The results of laboratory analyses performed by a state certified laboratory.

4. Any referenced documents.

5. Our understanding of the regulations of the State of California; also, if applicable, other local regulations.

It is possible that variations in the soil and ground water conditions could 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 ground water must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

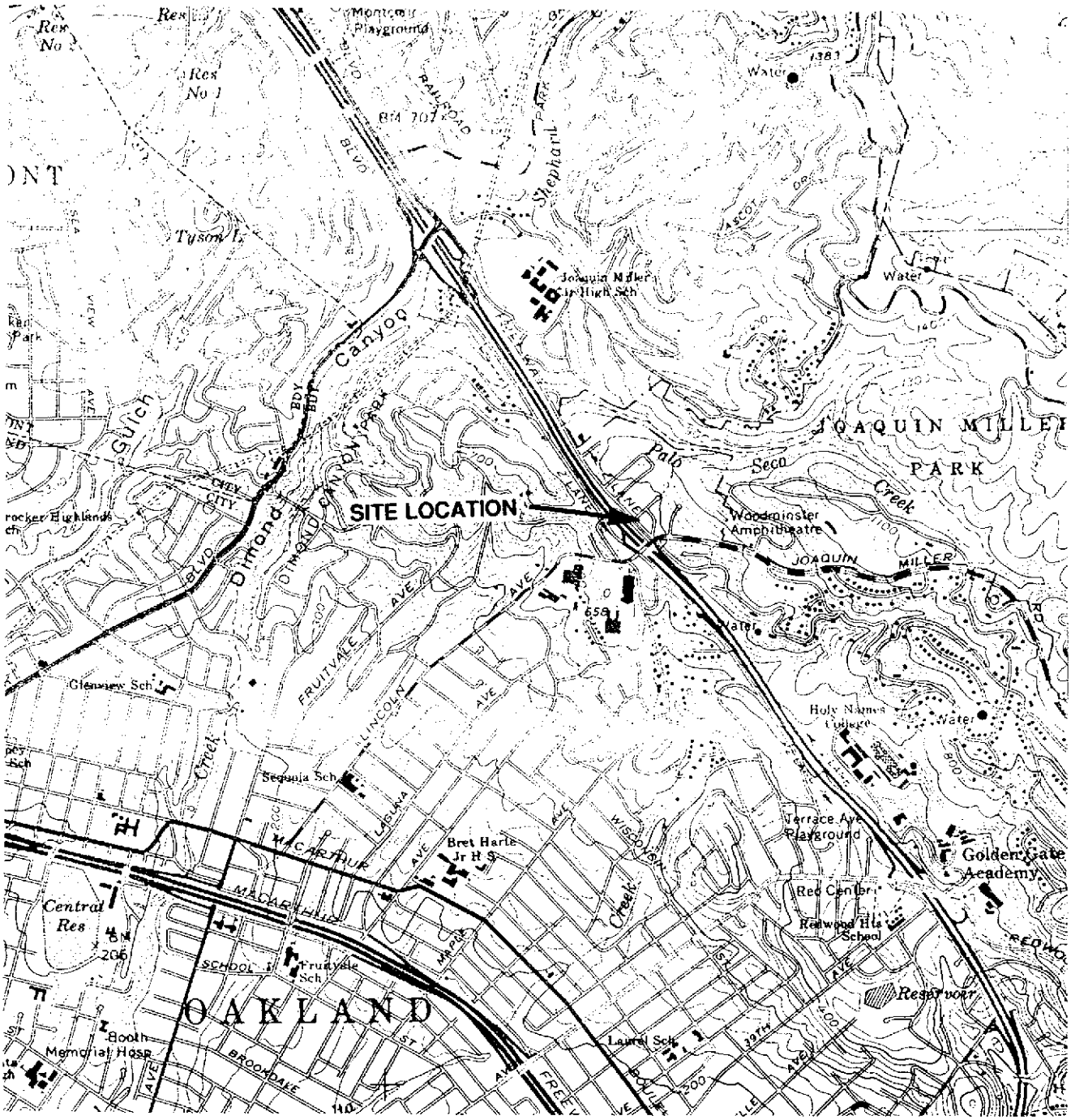
If you have any questions regarding this report, please call.

Respectfully submitted,

Steven M. Richardson, R.G. #4684
Senior Project Manager

Brian Mossman
Project Geologist

Enclosures:
Figures
Tables
Attachment 1 - Water Sample Log
Attachment 2 - Laboratory Report and Chain-of-Custody
Attachment 3 - S.A.V.E. System Performance Data



SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

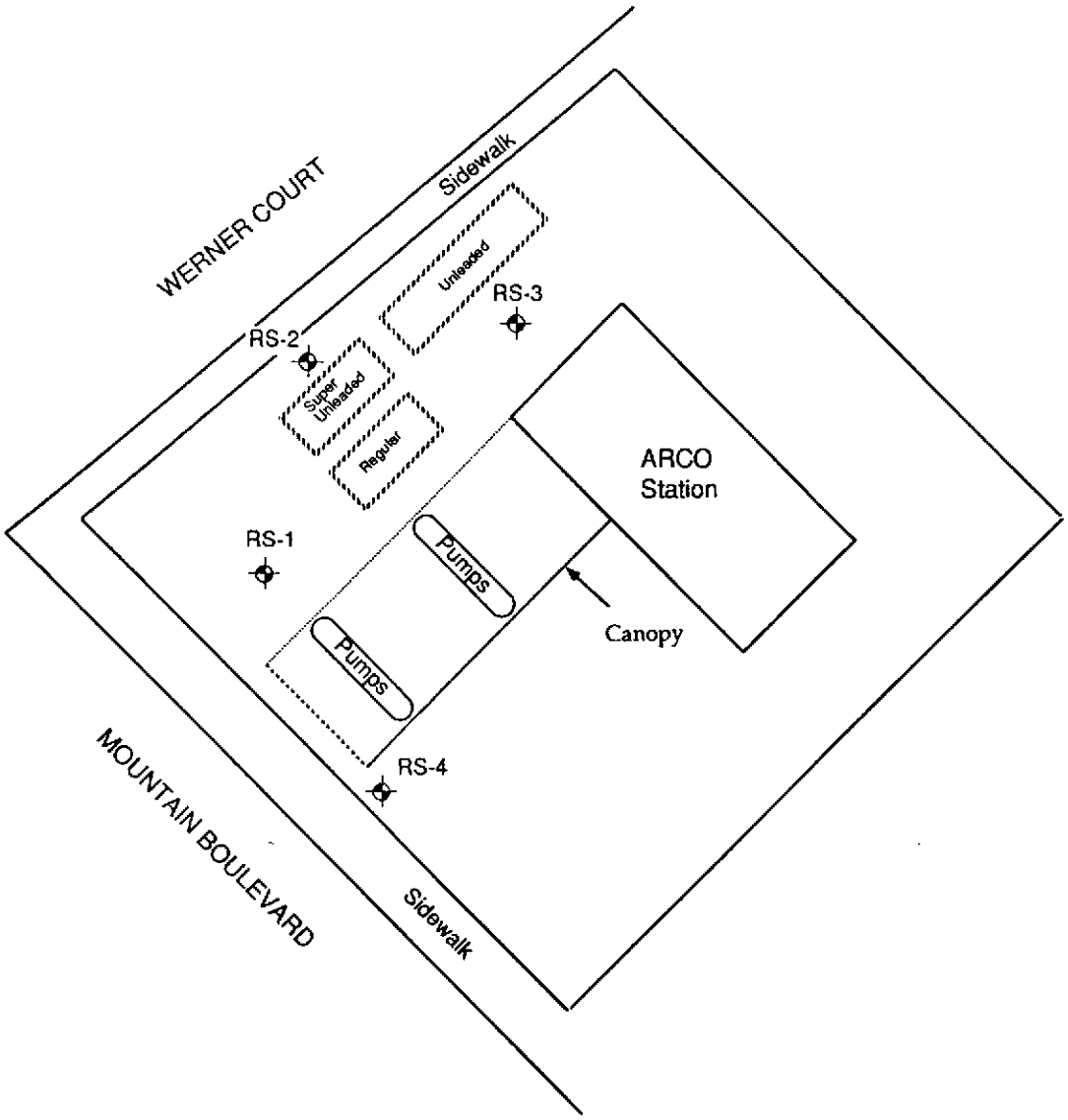
1 .5 0 1 KILOMETER

N

DESERT PETROLEUM

DESERT PETROLEUM STATION #796,
2844 MOUNTAIN BOULEVARD,
OAKLAND, CALIFORNIA
FIGURE 1 - LOCATION MAP

RSI REMEDIATION SERVICE, INT'L.



LEGEND

MONITORING WELL LOCATION

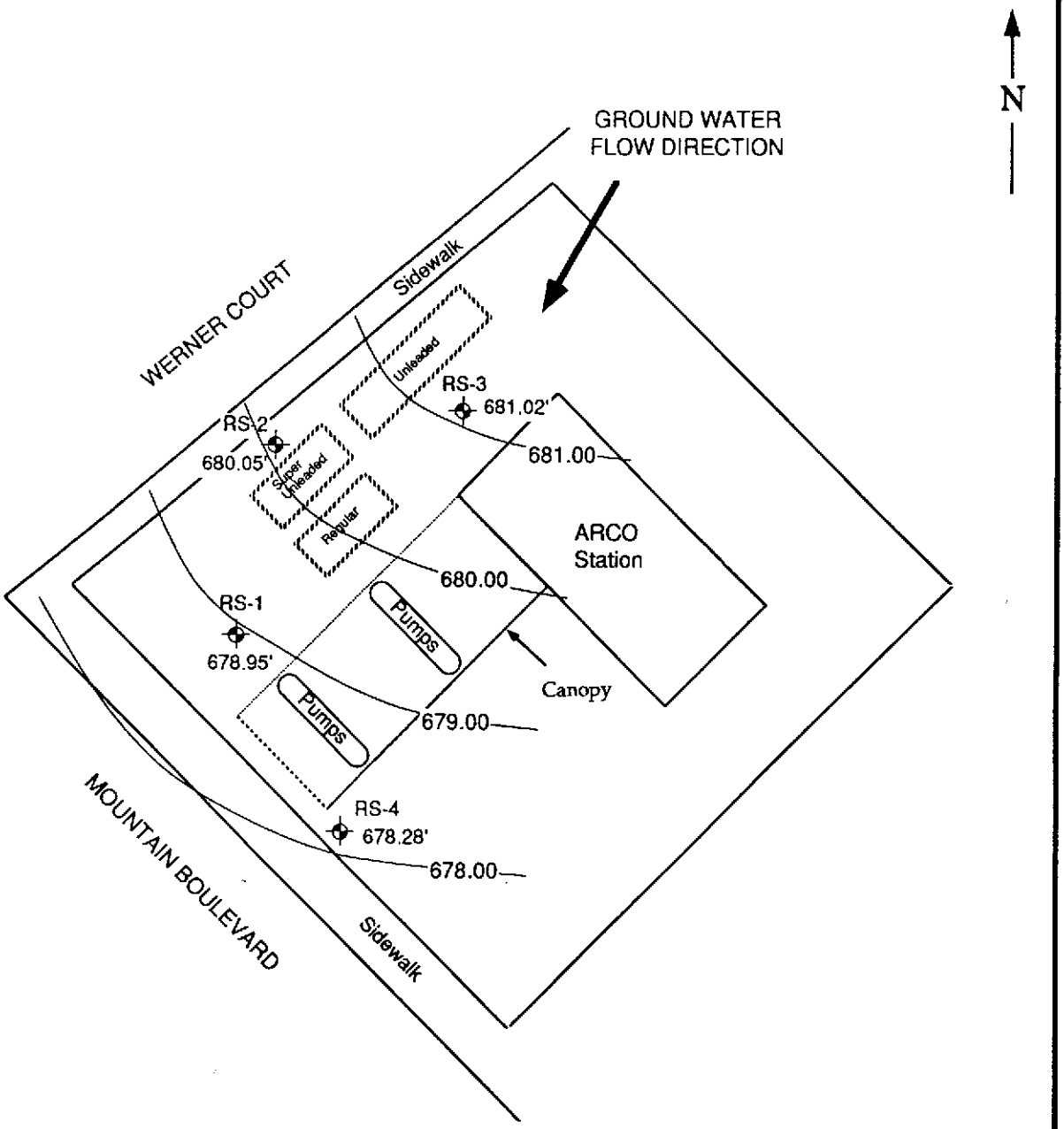
SCALE IN FEET

0 15 30

DESERT PETROLEUM

DESERT PETROLEUM STATION #796,
2844 MOUNTAIN BOULEVARD,
OAKLAND, CALIFORNIA
FIGURE 2 - PLOT PLAN

RSI REMEDIATION SERVICE, INT'L.



LEGEND

678.00 GROUND WATER CONTOUR LINE OF EQUAL ELEVATION

MONITORING WELL LOCATION WITH GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL ON 10/10/91

SCALE IN FEET

0 15 30

DESERT PETROLEUM

DESERT PETROLEUM STATION #796,
2844 MOUNTAIN BOULEVARD,
OAKLAND, CALIFORNIA
FIGURE 3 - GROUND WATER ELEVATION MAP

RSI REMEDIATION SERVICE, INT'L.

TABLE 1
SUMMARY OF GROUND WATER ELEVATION DATA AND ANALYTICAL RESULTS

WELL NUMBER AND ELEVATION (feet - MSL)*	DATE SAMPLED	FLOATING PRODUCT THICKNESS (inches)	DEPTH TO GROUND WATER (feet)**	GROUND WATER ELEVATION	EPA METHOD 5030 (µg/l)	EPA METHOD 8020 (µg/l)			
					TPH	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES
MINIMUM REPORTING LIMIT (µg/l)					50	0.5	0.5	0.5	0.5
[illegible]	5-31-90	None	7.12	682.05	2,700	370	420	40	320
689.17	10-10-91	[illegible]	10.22	678.95	1,000	140	100	45	210
RS-2	5-31-90	None	6.95	691.94	23,000	7,200	4,800	3,00	3,300
688.89	10-10-91	None	8.84	680.05	13,000	[illegible]	910	300	2,300
RS-3	5-31-90	None	6.00	684.00	330	2	1	1	150
690.00	10-10-91	None	8.98	681.02	ND	ND	ND	ND	ND
RS-4	5-31-90	None	8.38	680.72	440	4	11	9	49
689.10	10-10-91	None	10.82	678.28	830	280	120	24	170

MSL = mean sea level.

* As Measured on 10-10-91.

** Corrected to well elevation as measured on 10-10-91.

ATTACHMENT 1

WATER SAMPLE LOGS

WATER SAMPLE LOG

CLIENT: Desert Petroleum DATE: 10-10-91
PROJECT: Station # 796
LOCATION: Oakland

WELL NUMBER: RS-1

WEATHER CONDITIONS: Clear, warm, windy
FIELD OBSERVATIONS: Water has very slight sheen, clear color, strong gasoline odor.

TOTAL DEPTH OF WELL: 30' CASING DIAMETER: 4"
DEPTH TO FREE PRODUCT: — ONE WELL VOLUME = 12.9
DEPTH TO WATER: 10.22 PURGING METHOD: PVC BAILER
DEPTHS MEASURED FROM: well cover

INDICATOR PARAMETERS

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments (Color, Odor, Tubidity)
10:18	0	7.95	68.5	1.31	Clear, strong gasoline odor, none
10:21	10	7.53	68.3	1.37	" slight " "
10:26	20	7.49	67.1	1.24	lt Yellow " " , low
10:30	30	7.65	68.3	1.43	Gray, " " , mod
10:35	35	7.61	67.8	1.43	" " " "
	Bailed Dry @ 35 gallons				

TOTAL DISCHARGE: 35 gallons CASING VOLUMES REMOVED: 2.7

TIME SAMPLE COLLECTED: 1400
DEPTH TO WATER AT TIME OF SAMPLE: 11.21' PERCENT RECHARGE: 95
METHOD OF SAMPLE COLLECTION: Disposable bailer
APPEARANCE OF SAMPLE: Clear, non turbid, no odor
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 VOA 40 ml vials
SAMPLE TRANSPORTED TO:

SAMPLED BY: S. Richardson

RSI

WATER SAMPLE LOG

CLIENT: Desert Petroleum
DATE: 10-10-91
PROJECT: Station #796
LOCATION: Oakland

WELL NUMBER: RS-2

WEATHER CONDITIONS: Clear, Warm & Windy
FIELD OBSERVATIONS: water light yellow color, gas odor

TOTAL DEPTH OF WELL: 25
CASING DIAMETER: 4"
DEPTH TO FREE PRODUCT: —
ONE WELL VOLUME = 10.5
DEPTH TO WATER: 8.84
PURGING METHOD: PVC Bailer
DEPTHS MEASURED FROM: well casing

INDICATOR PARAMETERS

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments (Color, Odor, Tubidity)
9:40	0	7.65	69.1	1.18	LT YELLOW, GAS, NONE
9:43	10	7.70	67.4	1.17	V/LT YELLOW, SLT GAS, NONE
9:46	20	7.88	67.3	1.18	" , " , "
10:00	30	7.90	67.0	1.16	" , " , "
	Bailed Dry @ 30 gallons				

TOTAL DISCHARGE: 30
CASING VOLUMES REMOVED: 3

TIME SAMPLE COLLECTED: 10:52
DEPTH TO WATER AT TIME OF SAMPLE: 11.94
PERCENT RECHARGE: 80
METHOD OF SAMPLE COLLECTION: Disposable bailer
APPEARANCE OF SAMPLE: Clear, no turbidity, slight gasoline odor.
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 VOA 40 ml vials
SAMPLE TRANSPORTED TO:

SAMPLED BY: S. Richardson

RSI

WATER SAMPLE LOG

CLIENT: Desert Petroleum DATE: 10-10-91
PROJECT: Station #796
LOCATION: Oakland

WELL NUMBER: RS-3

WEATHER CONDITIONS: Clear, warm & Windy
FIELD OBSERVATIONS: WATER CLEAR, NO SHEEN OR ODOR. WELL PUMPED FULLY DOWN AFTER ~3 WELL VOLS, FAIR-GOOD RECHARGE

TOTAL DEPTH OF WELL: 24.96 CASING DIAMETER: 4"
DEPTH TO FREE PRODUCT: N/A ONE WELL VOLUME = 10.5
DEPTH TO WATER: 8.98' PURGING METHOD:
DEPTHS MEASURED FROM: Top of well cover

INDICATOR PARAMETERS

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments (Color, Odor, Tubidity)
9:09	0	7.19	71.3	1.11	CLEAR, NONE, NONE
9:13	10	7.29	68.8	1.09	LT BRN, NONE, CLOUDY
9:17	20	7.38	67.2	1.08	" , " , "
9:23	30	7.95	66.8	1.02	" , " , "
9:30	42	8.08	66.4	1.05	BROWN, NONE, MOD

TOTAL DISCHARGE: 42 CASING VOLUMES REMOVED: 4

TIME SAMPLE COLLECTED: 13:45
DEPTH TO WATER AT TIME OF SAMPLE: 9.02 PERCENT RECHARGE: 100
METHOD OF SAMPLE COLLECTION: Disposable bailer
APPEARANCE OF SAMPLE: Clear, No odor, Non turbid
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 VOA 40 ml vials.
SAMPLE TRANSPORTED TO:

SAMPLED BY: S. Richardson

RSI

WATER SAMPLE LOG

CLIENT: Desert Petroleum DATE: 10-10-91
PROJECT: Station #796
LOCATION: Oakland

WELL NUMBER: RS-4

WEATHER CONDITIONS: Clear, warm, windy
FIELD OBSERVATIONS: WATER CLEAR, NO SHEEN, SLIGHT SULFUR OR GAS SMELL

TOTAL DEPTH OF WELL: 26 CASING DIAMETER: 4"
DEPTH TO FREE PRODUCT: — ONE WELL VOLUME = 9.9
DEPTH TO WATER: 10.82 PURGING METHOD: PVC BAILER
DEPTHS MEASURED FROM: WELL COVER

INDICATOR PARAMETERS

Time	Discharge (gallons)	pH	Temp in F.	Specific Conductance (µmhos/cm)	Comments (Color, Odor, Tubidity)
10:47	0	7.74	78.4	1.35	CLEAR, SLT Z, NONE
10:53	10	7.39	74.8	1.23	" , " , "
10:59	20	7.37	72.5	1.19	" , NONE, "
11:14	30	7.50	73.8	1.22	LT BRN, NONE, LOW

TOTAL DISCHARGE: Dry @ 30 CASING VOLUMES REMOVED: 3

TIME SAMPLE COLLECTED: 5:15
DEPTH TO WATER AT TIME OF SAMPLE: 13.92 PERCENT RECHARGE: 80
METHOD OF SAMPLE COLLECTION: Disposable bailer
APPEARANCE OF SAMPLE: Clear, no turbidity, no odor.
AMOUNT AND SIZE OF SAMPLE CONTAINERS: 3 VOA 40 ml vials.
SAMPLE TRANSPORTED TO:

SAMPLED BY: S. Richardson

RSI

ATTACHMENT 2

LABORATORY REPORT AND CHAIN-OF-CUSTODY

ANAMETRIX INC
Environmental & Analytical Chemistry
1961 Concourse Drive, Suite E, San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

REPORT

MR. STEVE RICHARDSON
REMEDIATION SERVICE, INT'L.
P.O. BOX 1601
OXNARD, CA 93032

Workorder # : 9110107
Date Received : 10/11/91
Project ID : DP-796
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9110107- 1	RS-1
9110107- 2	RS-2
9110107- 3	RS-3
9110107- 4	RS-4
9110107- 5	TRIP BLANK

This report consists of 5 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Manager

10-22-91
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. STEVE RICHARDSON
REMEDIATION SERVICE, INT'L.
P.O. BOX 1601
OXNARD, CA 93032

Workorder # : 9110107
Date Received : 10/11/91
Project ID : DP-796
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9110107- 5	TRIP BLANK	WATER	10/09/91	BTEX
9110107- 1	RS-1	WATER	10/10/91	TPHg/BTEX
9110107- 2	RS-2	WATER	10/10/91	TPHg/BTEX
9110107- 3	RS-3	WATER	10/10/91	TPHg/BTEX
9110107- 4	RS-4	WATER	10/10/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. STEVE RICHARDSON
REMEDIATION SERVICE, INT'L.
P.O. BOX 1601
OXNARD, CA 93032

Workorder # : 9110107
Date Received : 10/11/91
Project ID : DP-796
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer 10/21/91
Department Supervisor Date

C. Zam 10.21.91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9110107
Matrix : WATER
Date Sampled : 10/09 & 10/91

Project Number : DP-796
Date Released : 10/21/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# RS-1 -01	Sample I.D.# RS-2 -02	Sample I.D.# RS-3 -03	Sample I.D.# RS-4 -04	Sample I.D.# TRIP BLANK -05
Benzene	0.5	140	4300	ND	280	ND
Toluene	0.5	100	910	ND	120	ND
Ethylbenzene	0.5	45	300	ND	24	ND
Total Xylenes	0.5	210	2300	ND	170	ND
TPH as Gasoline	50	1100	13000	ND	830	-
% Surrogate Recovery		94%	97%	89%	87%	88%
Instrument I.D.		HP8	HP8	HP8	HP8	HP8
Date Analyzed		10/15/91	10/16/91	10/15/91	10/15/91	10/15/91
RLMF		5	100	1	5	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 10.22.91 Date

Supervisor 10/22/91 Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9110107
Matrix : WATER
Date Sampled : N/A

Project Number : DP-796
Date Released : 10/21/91

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# 08B1015B BLANK	Sample I.D.# 08B1016A BLANK
Benzene	0.5	ND	ND
Toluene	0.5	ND	ND
Ethylbenzene	0.5	ND	ND
Total Xylenes	0.5	ND	ND
TPH as Gasoline	50	ND	ND
% Surrogate Recovery		97%	109%
Instrument I.D.		HP8	HP8
Date Analyzed		10/15/91	10/16/91
RLMF		1	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
RLMF - Reporting Limit Multiplication Factor.
Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Analyst 10.22.91 Date

Supervisor Cheryl Balmes 10/22/91 Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT
EPA METHOD 5030 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : DP-796 RS-3
Matrix : WATER
Date Sampled : 10/10/91
Date Analyzed : 10/15/91

Anametrix I.D. : 9110107-03
Analyst : CF
Supervisor : CB
Date Released : 10/21/91

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	%REC MS	MSD (ug/L)	%REC MSD	RPD	%REC LIMITS
GASOLINE	1000	1040	104%	990	99%	-5%	48-145
P-BFB			93%		97%		53-147

* Limits established by Anametrix, Inc.

CLIENT CHAIN-OF-CUSTODY RECORD

9/10/91 CN (2) R230

PROJECT NUMBER: DP-796

PROJECT NAME:

Send Report Attention of: Steve Richardson

Report Due: / /

Verbal Due: / /

Sample Number	Date	Time	Comp	Grab	Station Location	Number of Cntnrs	Type of Containers	TPH (Gas)	BTEX	Condition of Samples	Initial
(1) RS-1	10/10/91	14:00		X		3	VOA	X	X	NO BUBBLES	All Samples arrived cold, proper containers present 10/11/91
(2) RS-2	"	16:52		X		"	"	X	X	1 mm bubble	
(3) RS-3	"	13:45		X		"	"	X	X	1 mm bubble	
(4) RS-4	"	16:30		X		"	"	X	X	No bubble	
(5) TRIP BLANK	10/9/91			X		"	"		X	NO BUBBLES	

T.A.T per Dave is 10 day (as) 10/11/91

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	10/11/91 11:30	[signature]	10/11/91 1130
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Remarks:

SAMPLE DISPOSAL:
Return to Client [____]
Soil Disposal by Anametrix ($5.00 per container) [____]

COMPANY: RSI
ADDRESS: P.O. Box 1601 Oxnard, CA 93032
PHONE: (805)-644-5892 FAX:

5025

ATTACHMENT 3

S.A.V.E. SYSTEM PERFORMANCE DATA

S.A.V.E. SYSTEM PERFORMANCE DATA

SUMMARY TABLE

PROJECT LOCATION: DESERT PETROLEUM, INC. STATION #796

MONTH			JUN 91	SEP 91					TOTAL
GROUNDWATER	SPRAY AERATOR WATER IN	GALLONS							
		TPH-PPM*							
	SPRAY AERATOR WATER OUT	GALLONS							
		TPH-PPM*							
VAPOR	RECOVERED VAPORS FROM WELLS	SCFM*	12.4	10.3					
		TPH-PPM*	12000.0	3200.0					
	TOTAL VAPORS TO ENGINE	SCF	391750.8	102554.4					
		TPH-PPM*	12000.0	3200.0					
AIR	TO SPRAY AERATOR	SCFM	17.4	14.4					
	TO ENGINE	SCFM	17.4	14.4					
FREE PRODUCT	RECOVERED FROM WELLS	GALLONS							
ENGINE	EXHAUST	TPH-PPM*	210.0	580.0					
		CO-PPM*	0.0	0.0					
	OPERATION	HOURS	219.1	69.2					288.3
	SPEED	RPM	2058.1	2030.5					
TOTAL CONTAMINANT REMOVED	FROM THE PROJECT LOCATION	GALLONS	74.4	5.2					79.6

* DENOTES AVERAGE CONCENTRATIONS.

S.A.V.E. SYSTEM PERFORMANCE DATA

TABLE I

PROJECT LOCATION: DESERT PETROLEUM, INC. STATION #796

MONTH			SEP 91					
GROUNDWATER	SPRAY AERATOR WATER IN	GALLONS						
		TPH-PPM*						
	SPRAY AERATOR WATER OUT	GALLONS						
		TPH-PPM*						
VAPOR	RECOVERED VAPORS FROM WELLS	SCFM*	10.3					
		TPH-PPM*	3200.0					
	TOTAL VAPORS TO ENGINE	SCF	102554.4					
		TPH-PPM*	3200.0					
AIR	TO SPRAY AERATOR	SCFM	14.4					
	TO ENGINE	SCFM	14.4					
FREE PRODUCT	RECOVERED FROM WELLS	GALLONS						
ENGINE	EXHAUST	TPH-PPM*	580.0					
		CO-PPM*	0.0					
	OPERATION	HOURS	69.2					
	SPEED	RPM	2030.5					
TOTAL CONTAMINANT REMOVED	FROM THE PROJECT LOCATION	GALLONS	5.2					

* DENOTES AVERAGE CONCENTRATIONS.

S.A.V.E. SYSTEM
SUMMARY OF LABORATORY RESULTS FOR SEP 91
TABLE II

PROJECT LOCATION: DESERT PETROLEUM, INC. STATION #796

DATE	EXTRACTED H_2O TO AERATOR (mg/l)	DISCHARGED H_2O FROM AERATOR (mg/l)	EXTRACTED VAPOR FROM WELLS (ppmv)	ENGINE EXHAUST (ppmv)
9	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.	time: 12:30 by: J.M. TPH 3200. B. 91. T. 100. EB. 17. X. 98.	time: 12:00 by: J.M. TPH 580. B. ND T. ND EB. 0.022 X. 0.39
	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.
	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.	time: by: TPH. B. T. EB. X.

ND - Not Detected

NOTES:

S.A.V.E. SYSTEM
MONITORING DATA LOG FOR SEP 91
TABLE III

PROJECT LOCATION: DESERT PETROLEUM, INC. STATION #796

	DATE	TIME	ENGINE OPERATION DATA		PRESSURE READINGS AT				
			RUNNING TIME (HOURS)	SPEED (RPM)	EXTRACTION MANIFOLD (INCH H_2O)	EXTRACTION WELL (INCH H_2O)	EXTRACTION WELL (INCH H_2O)	SPRAY AERATOR (INCH Hg)	RECIRC WATER (PSI)
BEGIN	6	12:30	221.5	2000.0	50.0			13.0	12.0
	9	13:00	230.2	2000.0	>50.0			13.0	12.0
	13	10:30	269.6	2100.0	29.0			14.0	12.0
END	10/02/91	9:50	290.7						

NOTES:

09/06/91 ADDED OIL AND COOLANT.
09/13/91 SMOG TESTED AND MET WITH AQMD.

S.A.V.E. SYSTEM
MONITORING DATA LOG FOR SEP 91
TABLE IV

PROJECT LOCATION: DESERT PETROLEUM, INC. STATION #796

DATE	TEMPERATURE READINGS AT					FLOW READING AT			
	AMBIENT AIR (F)	EXTRACTED VAPOR (F)	ENGINE OUTLET (F)	CATALYST OUTLET (F)	RECIRC WATER (F)	AIR TO SPRAY TANK (CFM)	EXTRACTED VAPORS (CFM)	AUXILIARY FUEL (CFH)	DISCHARGE WATER (GALS)
6	83.0	83.0			100.0	17.0	14.0	100.0	
9	80.0	80.0			100.0	14.0	12.0	95.0	
13	78.0	78.0			85.0	14.0	10.0	95.0	

NOTES:

S.A.V.E. SYSTEM
MONITORING DATA LOG FOR SEP 91
TABLE V

PROJECT LOCATION: DESERT PETROLEUM, INC. STATION #796

DATE	EXHAUST GAS COMPONENTS				
	H-C	CO	CO_2	O_2	NOx
6					
9	0.09 %	0.0 ppm	9.60 %	3.90 %	
13					

NOTES: