PHYSTORY FROM

A Report Prepared For:

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QUARTERLY MONITORING REPORT FORMER YOUNG'S CLEANERS FOOTHILL SQUARE SHOPPING CENTER OAKLAND, CALIFORNIA

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TABLE OF CONTENTS

		'
LIST OF TABLES	5	iii
LIST OF ILLUST	RATIONS	iii
	ΓΙΟΝ	
	ND INFORMATION	
	VEL MEASUREMENTS	
	ATER SAMPLING	
	N OF MONITORING RESULTS	
5.0 Discussion	el Measurements	3
5.2 Groundwat	ter Chemistry	4
	SSURANCE/QUALITY CONTROL (QA/AC)	
	ES	
TABLES		
ILLUSTRATION	TS .	
APPENDICES	A - WATER-LEVEL DATA FORM	
	B - GROUNDWATER SAMPLING REPORT	
	C - LABORATORY REPORT AND CHAIN-OF-CU	STODY RECORDS
DISTRIBUTION		

LIST OF TABLES

Table 1	Monitoring Well Completion Details
Table 2	Water-Level Elevation Data Through July 1996
Table 3	Summary of Analytical Results for Groundwater Samples Through July 1996

LIST OF ILLUSTRATIONS

Plate 1	Location Map
Plate 2	Site Plan and Monitoring Well Location Map
Plate 3	Water-Level Elevations - Shallow Groundwater Zone
Plate 4	Water-Level Elevations - Deep Groundwater Zone
Plate 5	PCE Concentrations - Shallow Groundwater Zone
Plate 6	PCE Concentrations - Deep Groundwater Zone

1.0 INTRODUCTION

This report presents the results of the second quarterly groundwater monitoring performed by PES Environmental, Inc. (PES) during July 1996 at Foothill Square Shopping Center (Site) in Oakland, California (Plate 1). PES has been retained by Jay-Phares Corporation to conduct the quarterly groundwater monitoring at the site. The current groundwater monitoring program consists of measuring the depth to groundwater in 14 onsite monitoring wells on a quarterly basis, and purging and sampling 12 of the monitoring wells (Wells WGR MW-2 through 4, AMW-1, AMW-4 through 9, MW-6, and MW-7).

The purpose of the groundwater monitoring program at the site is to: (1) evaluate the presence of volatile organic compounds (VOCs) in groundwater; and (2) monitor water-level variations at the site. The quarterly monitoring program was performed in accordance with the procedures outlined in the Proposal, Groundwater Monitoring, Former Young Cleaners, Foothill Square Shopping Center, Oakland, California dated April 8, 1996 prepared by PES (PES, 1996).

2.0 BACKGROUND INFORMATION

The site is located in a residential and commercial area in Oakland, California. The site is presently used as a shopping center, which was developed in the early 1960's. Prior to the development of the Foothill Square Shopping Center, the site was a truck manufacturing plant. Young's Cleaners, located in the center of the shopping center near Well AMW-6, operated at the site between 1984 and 1995. Prior to Young's Cleaners, a coin operated dry cleaner, Norge Cleaners, operated at the location between 1962 and 1980. The cleaners have been on the CALSITES database list since 1980.

Beginning in January 1989, Western Geologic Resources (WGR) installed and monitored Wells WGR MW-1 through WGR MW-5 on the property to characterize the subsurface conditions due to the presence of the adjacent ARCO gas station, northwest of the site. Wells WGR MW-1, WGR MW-2, WGR MW-3, and WGR MW-5 were installed in what WGR defined as the shallow groundwater bearing zone, and Well WGR MW-4 was installed in the deep groundwater bearing zone. Monitoring well locations in the vicinity of the site are shown on Plate 2.

Between 1991 and 1993, RESNA Consultants (RESNA) conducted an investigation on behalf of ARCO for the service station site in order to define the extent of gasoline contamination caused by leakage of petroleum fuels. During their investigation, RESNA reported detectable tunk se . concentrations of chlorinated solvents in several soil borings. As a result, Alameda County Health Care Services Agency (ACHSA) requested an investigation of the vertical and lateral extent of tetrachloroethylene (PCE) on both the ARCO site and the Foothill Square Shopping Center by ARCO as documented in the March 23, 1993 letter.

In order to verify the source and extent of the PCE contamination, Augeas Corporation (Augeas) installed Wells AMW-1 through AMW-3 in September through November of 1994, Wells AMW-4 and AMW-5 in March 1995, and Wells AMW-6 through AMW-9 in July through August of 1995. Using groundwater bearing zones defined by the WGR wells, Augeas installed Wells AMW-1 through AMW-7 in the shallow groundwater bearing zone, and Wells AMW-8 and AMW-9 in the deep groundwater bearing zone. A summary of the monitoring well completion details is provided in Table 1.

Augeas began performing groundwater monitoring of the AMW wells in October 1994. During September 1995, the last monitoring event conducted by Augeas, Wells WGR MW-1 through WGR MW-5, and MW-6 and MW-7 (installed on Foothill Square property by ARCO) were monitored in addition to the AMW wells (Augeas, 1995). The groundwater investigations conducted by Augeas concluded that the PCE contamination on the site was caused by a release of solvents from the dry cleaner and the associated underground sanitary sewer lateral. From October 1995 to January 1996, All Environmental, Inc. (AEI) excavated the contaminated soil and backfilled the excavation with clean fill material. During the excavation process, Wells AMW-2 and AMW-3 were accidentally destroyed (AEI, 1996). Soil from the excavation was spread over the southeast corner of the property for treatment by aeration under a permit from the Bay Area Air Quality Management District. Well WGR MW-5 was covered by the soil and has not been accessible since that time.

3.0 WATER-LEVEL MEASUREMENTS

Water levels in 12 onsite groundwater monitoring wells (Wells WGR MW-2 through WGR MW-4, AMW-1, AMW-4 through AMW-9, MW-6, and MW-7) were measured by PES prior to sampling on July 17, 1996. Monitoring data was not collected from WGR MW-1 because the vault was inaccessible after being accidentally paved over with asphalt in the few preceding weeks. Well WGR MW-5 has been inaccessible since 1995 when it was covered by the stockpile of excavated soil. Depth-to-water in the monitoring wells was measured from the top-of-casing (TOC) reference benchmark to a precision of 0.01-feet using an electronic water-level indicator/interface probe. Depth-to-water measurements were converted to water-level elevations referenced to mean sea level (MSL) by subtracting the depth to water from the TOC reference elevation. Free product was not observed in any of the monitoring wells. The Water Level Data Form completed by PES is presented in Appendix A.

To prevent cross-contamination between wells, the portion of the water-level indicator that was submerged in the well was cleaned between well measurements using a phosphate-free detergent/deionized water solution and double rinsed with deionized water.

4.0 GROUNDWATER SAMPLING

Groundwater samples were collected from Wells WGR MW-2 through WGR MW-4, AMW-1, AMW-4 through AMW-9, MW-6, and MW-7 on July 17, 1996, by Blaine Tech Services, Inc. (Blaine Tech) of San Jose, California, under the direct supervision of PES.

Groundwater samples were collected from each well after removing approximately three well volumes of water using either a positive displacement pump or disposable bailers. During well purging, the discharged water was monitored for pH, temperature, electrical conductivity, and turbidity. Following purging, samples were collected from the wells using a stainless steel or teflon disposable bailer and transferred to the appropriate laboratory sample containers. The sample containers were filled slowly to minimize sample volatilization and to ensure that the sample was free of air bubbles. The samples were labeled to designate sample number, time and date collected, and analysis required. The samples were immediately placed in a chilled, thermally-insulated cooler. To prevent cross-contamination between wells, the pump and the bailer were decontaminated using a high pressure steam cleaner prior to or after sampling at each well. Sampling procedures are documented in the groundwater sampling report prepared by Blaine Tech and included in Appendix B.

Groundwater samples were transported under chain-of-custody protocol to American Environmental Network (AEN), a state-certified laboratory in Pleasant Hill, California. Samples collected from the 12 wells were analyzed for VOCs using EPA Test Method 8010. The AEN laboratory reports and chain-of-custody records are included in Appendix C.

5.0 DISCUSSION OF MONITORING RESULTS

This section presents a summary of water-level measurements and groundwater analyses results from the July 1996 sampling event.

5.1 Water-Level Measurements

Depth-to-water measurements for July, 1996, for the shallow groundwater zone ranged from 12.42 feet (AMW-4) to 22.71 feet (WGR MW-2) below the top-of-casing (TOC). Shallow groundwater zone water-level elevations ranged from 37.54 feet MSL (MW-7) to 52.37 feet MSL (AMW-4). Depth-to-water measurements for the deep groundwater zone ranged from 15.02 feet (AMW-7) to 32.36 feet (MW-6) below TOC. Deep groundwater zone water-level elevations ranged from 29.42 feet MSL (MW-6) to 47.95 feet MSL (AMW-8). Depth-to-water measurements and calculated water-level elevations are presented in Table 2.

Plates 3 and 4 present water-level elevation contours developed from water levels measured on July 17, 1996, for the shallow and the deep groundwater zones, respectively. The contoured water-level elevations indicate that groundwater flow in both the shallow and the deep groundwater zones is generally west to northwest. The groundwater gradients in the shallow

and deep groundwater zones were approximately 0.044 and 0.078 foot per foot (ft/ft), respectively.

5.2 Groundwater Chemistry

A summary of laboratory chemical analyses results is presented in Table 3; only those chemicals that were detected in at least one sample are listed. The complete analytical laboratory reports and chain-of-custody forms are presented in Appendix C.

In the shallow groundwater zone, the highest concentrations of VOCs were detected in Wells AMW-6, located near the former dry cleaners, and AMW-7, located adjacent to the onsite sanitary sewer lateral. During this monitoring period, PCE was detected at concentrations ranging from 0.6 to 3,300 micrograms per liter (µg/L) in Wells AMW-4, AMW-5, AMW-6 and AMW-7. PCE concentrations in wells completed in the shallow groundwater zone are presented on Plate 5. Trichloroethylene (TCE), cis-1,2-dichloroethylene (c-1,2-DCE), trans-1,2-dichloroethylene (t-1,2-DCE), and Freon-12 were also detected in Wells WGR MW-3, AMW-6 and AMW-7, but generally at much lower concentrations than PCE. No VOCs were detected in Wells WGR MW-2 and AMW-1.

In the deep groundwater zone, PCE was detected in Wells AMW-8, AMW-9, and MW-6 at concentrations ranging from 1.6 to 590 μ g/L. PCE concentrations in deep wells are presented on Plate 6. Low concentrations of TCE and Freon-12 were detected in Wells AMW-9 and MW-6, respectively. No VOCs were detected in Well WGR MW-4.

6.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/AC)

Chemical data obtained from groundwater sample analyses were validated according to accuracy, precision, and completeness criteria. For the quantity of samples analyzed this quarter, the QA/QC program evaluated chemical data on the basis of one trip blank and one field equipment blank.

The evaluation procedure for blanks includes a qualitative review of the chemical analyses data reported by the laboratory. The trip blank was prepared by AEN and submitted for EPA Test Method 8010. The field equipment blank was prepared in the field using deionized water supplied by AEN and analyzed using EPA Test Method 8010. No VOCs were detected in the trip blank or the field equipment blank. The data from AEN are considered to be representative and of good quality.

7.0 REFERENCES

- All Environmental, Inc. (AEI), 1996. Soil Remedial Investigation and Excavation Project Summary, Young's Cleaners, Foothill Shopping Center, 10700 MacArthur Boulevard, Oakland, California, 94605. February 7.
- Augeas Corporation (Augeas), 1995. Report of Subsurface Investigation, Young's Cleaners, 10700 MacArthur Boulevard, Oakland, California. December.
- PES Environmental, Inc. (PES), 1996. Proposal, Groundwater Monitoring, Former Young Cleaners, Foothill Square Shopping Center, Oakland, California. April 8.

Table 1. Monitoring Well Completion Details

Former Young's Cleaners Foothill Square Shopping Center Oakland, California

Weil Number	Date installed	Installed By	Total Depth (feet bgs)	Screened Interval (feet bgs)	Top-of-Casing Elevation (feet MSL)	Groundwater Zone Monitored
WGR MW-1 (1)	12/5/88	WGR	33.5	23.5 - 28.5	65.97	Shallow
WGR MW-2	12/6/88	WGR	40.5	23 - 28	63.18	Shallow
WGR MW-3	12/7/88	WGR	42	22 - 27	58.34	Shallow
WGR MW-4	12/7/88	WGR	50.5	23 - 45	60.02	Deep
WGR MW-5 (2)	12/8/88	WGR	31.5	23.5 - 31.5	68.94	Shallow
AMW-1	9/12/94	Augeas	34	24 - 34	64.51	Shallow
AMW-2 (3)	9/30/94	Augeas	29	19 - 29	65.33	Shallow
AMW-3 (3)	11/18/94	Augeas	29	19 - 29	65.09	Shallow
AMW-4	3/22/95	Augeas	25	15 - 25	64.79	Shallow
AMW-5	3/22/95	Augeas	30	20 - 30	64.97	Shallow
AMW-6	NA	Augeas	25	NA	65.10	Shallow
AMW-7	NA	Augeas	25	NA \	64.24	Shallow
AMW-8	NA	Augeas	48	NA /	64.55	Deep
AMW-9	NA	Augeas	53	NA NA	63.48	Deep
MW-6	6/16/92	RESNA	56	37.5 - 56	61.78	Deep
MW-7	6/16/92	RESNA	37.5	17.5 - 37.5	58.64	Shallow

Note:

feet bgs = Feet below ground surface feet MSL = Feet above mean sea level

WGR = Western Geologic Resources, Inc.

Augeas = Augeas Corporation

RESNA = RESNA Consultants

(1) = Well accidently covered by asphalt paving in June 1996.

(2) = Well covered by soil remediation stockpile in 1995.

(3) = Well abandoned during site remediation activities in 1995.

NA = Not available

Screen interval is necessary

Well	Date Measured	Measured	Top of Casing Elevation (feet MSL)	Depth to Water (feet bgs)	Water Table Elevation (feet MSL)
Number	measureu	by	(ICCL IIICL)	(,
WGR MW-1	9/7/95	Augeas	65,97	5.82	60.15
(Shallow Zone)	4/16/96	PES	65.97	3.88	62.09
(Offallon Zuno)	7/17/96	PES	65.97	NM	-
WGR MW-2	11/3/94	WGR	63.18	25.70	37.48
(Shallow Zone)	3/23/95	Augeas	63.18	21.32	41.86
,	6/21/95	Augeas	63.18	21.55	41.63
	9/7/95	Augeas	63.18	23.37	39.81
	4/16/96	PES	63.18	20.97	42.21
	7/17/96	PES	63.18	22.71	40.47
WGR MW-3	5/2/94	Resna	58.34	20.06	38.28
(Shallow Zone)	8/3/94	Resna	58.34	22.30	36.04
•	12/6/94	EMCON	58.34	17.52	40.82
	3/10/95	EMCON	58.34	15.20	43.14
	6/5/95	EMCON	58.34	19.25	39.09
	8/29/95	EMCON	58.34	21.41	36.93
	9/7/95	Augeas	58.34	21.55	36.79
	11/16/95	EMCON	58.34	22.50	35.84
	2/28/96	EMCON	58.34	14.90	43.44
	4/16/96	PES	58.34	18.49	39.85
	5/28/96	EMCON	58.34	18.33	40.01
	7/17/96	PES	58.34	20.49	37.85
WGR MW-4	9/7/95	Augeas	60.02	27.20	32.82
(Deep Zone)	4/16/96	PES	60.02	23.26	36.76
	7/17/96	PES	60.02	25.89	34.13
WGR MW-5	1/11/89	WGR	68.94	19.00	49.94
(Shailow Zone)	9/7/95	Augeas	68.94	NM	-
	4/16/96	PES	68.94	NM	-
	7/17/96	PES	68.94	NM	-
AMW-1	10/4/94	Augeas	64.51	24.82	39.69
(Shallow Zone)	11/3/94	Augeas	64.51	25.08	39.43
	3/23/95	Augeas	64.51	21.42	43.09
	6/21/95	Augeas	64.51	23.50	41.01
	9/7/95	Augeas	64,51	23.01	41.50
	4/16/96	PES	64.51	21.99	42.52
	7/17/96	PES	64.51	22.65	41.86

Well Number	Date Measured	Measured by	Top of Casing Elevation (feet MSL)	Depth to Water (feet bgs)	Water Table Elevation (feet MSL)
AMW-2	10/4/94	Augeas	65.33	16.57	48.76
(Shallow Zone)	10/18/94	Augeas	65.33	16.70	48.63
(Gilaliow Zolle)	11/3/94	Augeas	65.33	16.83	48.50
	3/23/95	Augeas	65.33	13.12	52.21
	6/21/95	Augeas	65.33	13.00	52.33
	Well abandoned	, –			,
AMW-3	11/28/94	Augeas	65.09	14.84	50.25
(Shallow Zone)	3/23/95	Augeas	65.09	12.20	52.89
(Shallow Zone)	6/21/95	Augeas	65.09	11.80	53.29
	Well abandoned	1	· •		
AMW-4	5/15/95	Augeas	64.79	12.60	52.19
(Shallow Zone)	6/21/95	Augeas	64.79	12.50	52.29
(Silallow Zone)	9/7/95	Augeas	64.79	13.45	51.34
	4/16/96	PES	64.79	11.00	53.79
	7/17/96	PES	64.79	12.42	52.37
AMW-5	5/15/95	Augeas	64.97	13.71	51.26
(Shallow Zone)	6/21/95	Augeas	64.97	13.85	51.12
(Onanow Zone)	9/7/95	Augeas	64.97	14.70	50.27
	4/16/96	PES	64.97	13.04	51.93
	7/17/96	PES	64.97	14.48	50.49
AMW-6	9/7/95	Augeas	65.10	14.32	50.78
(Shallow Zone)	4/16/96	PES	65.10	12.10	53.00
(Chanon Estic)	7/17/96	PES	65.10	13.59	51.51
AMW-7	9/7/95	Augeas	64.24	15.30	48.94
(Shallow Zone)	4/16/96	PES	64.24	14.31	49.93
(GHZHOV Zono)	7/17/96	PES	64.24	15.02	49.22
AMW-8	9/7/95	Augeas	64.55	17.90	46.65
(Deep Zone)	4/16/96	PES	64.55	15.06	49.49
(D.10p 20110)	7/17/96	PES	64.55	16.60	47.95
AMW-9	9/7/95	Augeas	63.48	23.02	40.46
(Deep Zone)	4/16/96	PES	63.48	20.98	42.50
(-	7/17/96	PES	63.48	22.74	40.74

			Top of Casing	Depth to	Water Table
Well	Date	Measured	Elevation	Water	Elevation
Number	Measured	by	(feet MSL)	(feet bgs)	(feet MSL)
14dilloci	1110000000				
MW-6	6/30/92	RESNA	61.21	35.50	25.71
(Deep Zone)	7/15/92	RESNA	61.21	39.89	21.32
(BCCP Zono)	8/25/92	RESNA	61.21	34.90	26.31
	9/9/92	RESNA	61.21	NM	
	10/31/92	RESNA	61.21	NM	
	11/20/92	RESNA	61.21	NM	
	12/16/92	RESNA	61,21	NM	
	1/22/93	RESNA	61.21	36.52	24.69
ļ	2/12/93	RESNA	61.21	35.65	25.56
	3/28/93	RESNA	61.21	33.33	27.88
	4/30/93	RESNA	61.21	33.56	27.65
	5/12/93	RESNA	61.21	33.95	27.26
	6/17/93	RESNA	61.21	34.90	26.31
	8/18/93	RESNA	61.21	36.72	24.49
	11/10/93	RESNA	61.21	38.64	22.57
	2/4/94	RESNA	61.21	38.48	22.73
	5/2/94	RESNA	61.21	37.02	24.19
	8/3/94	RESNA	61.21	37.97	23.24
	12/6/94	EMCON	61.21	37.33	23.88
	3/10/95	EMCON	61.21	31.54	29.67
	6/5/95	EMCON	61.21	31.15	30.06
	8/29/95	EMCON	61.21	34.03	27.18
	9/7/95	Augeas	61.78*	34.09	27.69
	11/16/95	EMCON	61.78	36.40	25.38
	2/28/96	EMCON	61.78	30.18	31.60
	4/16/96	PES	61.78	29.40	32.38
	5/28/96	EMCON	61.78	30.29	31.49
	7/17/96	PES	61.78	32.36	29.42
	1/11/30		J		
101417	6/30/92	RESNA	58.22	23.70	34.52
MW-7	7/15/92	RESNA	58.22	23.10	35.12
(Shallow Zone)	8/25/92	RESNA	58.22	34.23	23.99
	9/9/92	RESNA	58.22	26.30	31.92
	10/31/92	RESNA	58.22	35.44	22.78
	11/20/92	RESNA	58.22	23.47	34.75
	12/16/92	RESNA	58.22	19.07	39.15
	1/22/93	RESNA	58.22	16.56	41.66
	2/12/93	RESNA	58.22	18.22	40.00
	3/28/93	RESNA	58.22	18.04	40.18
	(RESNA	58.22	19.34	38.88
	4/30/93	1	58.22	19.80	38.42
	5/12/93	RESNA	58.22	22.63	35.59
	6/17/93 8/18/93	RESNA RESNA	58.22	22.44	35.78

Former Young's Cleaners Foothill Square Shopping Center Oakland, California

Well Number	Date Measured	Measured by	Top of Casing Elevation (feet MSL)	Depth to Water (feet bgs)	Water Table Elevation (feet MSL)
MW-7 (Shallow Zone) (continued)	11/10/93 2/4/94 5/2/94 8/3/94 12/6/94 3/10/95 6/5/95 8/29/95 9/7/95 11/16/95 2/28/96 4/16/96 5/28/96 7/17/96	RESNA RESNA RESNA RESNA EMCON EMCON EMCON Augeas EMCON EMCON EMCON EMCON PES	58.22 58.22 58.22 58.22 58.22 58.22 58.22 58.64* 58.64 58.64 58.64 58.64	24.51 20.78 20.51 22.66 18.37 17.69 19.68 21.70 21.86 23.02 16.54 19.26 19.29 21.10	33.71 37.44 37.71 35.56 39.85 40.53 38.54 36.52 36.78 35.62 42.10 39.38 39.35 37.54

Notes:

feet MSL = Feet above mean sea level

NA = Not accessible

WGR = Western Geologic Resources, Inc.

Augeas = Augeas Corporation

PES = PES Environmental, Inc.

RESNA = RESNA Consultants

* = Top of casing elevations were resurveyed by Augeas Corporation in March 1995.

Table 3. Summary of Analytical Results for Groundwater Samples Through July 1996

Well	Date	Sampled	Sampled Concentrations expressed in micrograms pe	grams per lite	er liter (µg/L)		
Number	Sampled	by	PCE	TCE	c-1,2-DCE	t-1,2-DCE	Freon-12
			_		-0.4	40.4	<0.1
WGR MW-1	12/13/88	WGR	<0.1	<0.1	<0.1	<0.1	<0.1 <0.5
(Shallow Zone)	9/12/95	Augeas	<0.5	<0.5	<0.5	<0.5	
ļ	7/17/96	PES	NS	NS	NS	NS	NS
WGR MW-2	12/13/88	WGR	<0.1	<0.1	<0.1	<0.1	<0.1
(Shallow Zone)	2/10/94	WGR	<0.5	<0.5	<0.5	<0.5	<0.5
,	3/23/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	6 / 21/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	9/11/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	<2
	7/17/96	PES	<0.5	<0.5	<0.5	<0.5	<2
WGR MW-3	12/13/88	WGR	<0.1	<0.1	<0.1	<0.1	<0.1
(Shallow Zone)	5/2/94	EMCON	<1	<1	<1	NS	NS
(GIIZIOW ZOIIC)	8/3/94	EMCON	<1	<1	<1	NS	NS
	12/6/94	EMCON	4	<1	<1	l NS	NS
	3/11/95	EMCON	<1	<1	<1	<1	_
	6/5/95	EMCON	<1	<1	<1	<1	
	8/29/95	EMCON	<1	<1	<1	<1	_
	9/11/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	11/16/95	EMCON	<1	<1	<1	<1	
	4/16/96	PES	0.6	0.5	<0.5	<0.5	11
	2/28/96	EMCON	<1	<1	<1	<1	
	5/28/96	EMCON	<1	<1	<1	<1	_
	7/17/96	PES	<0.5	0.7	<0.5	<0.5	<2
	111190	PES	70.5	0.1	10.0		_
WGR MW-4	12/13/88	WGR	<0.1	<0.1	<0.1	<0.1	<0.1
(Deep Zone)	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	<2
	7/17/96	PES	<0.5	<0.5	<0.5	<0.5	<2
WGR MW-5	12/5/88	WGR	<0.1	<0.1	<0.1	<0.1	<0.1
(Shallow Zone)	7/17/96	PES	NS	NS	NS	NS	NS
AMW-1	10/4/94	Augeas	<0.2	<0.2	0.5	<0.5	<0.5
(Shallow Zone)	3/23/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
(=)	6/21/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	9/11/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	<2
	7/17/96	PES	<0.5	<0.5	<0.5	<0.5	<2
AMW-2	10/4/94	Augeas	28,000	320	110	50	<0.5
(Shallow Zone)	10/18/94	Augeas	18,000	<250	<250	<250	<250
(Ondion Zono)	11/8/94	Augeas	35,000	<0.5	<0.5	<0.5	<0.5
	3/23/95	Augeas	13,000	<250	<250	<250	<250

Table 3. Summary of Analytical Results for Groundwater Samples Through July 1996

Well	Date	Sampled	Concen	trations expre	ssed in micro	grams per lite	r (µg/L)
Number	Sampled	by	PCE	TCE	c-1,2-DCE	t-1,2-DCE	Freon-12
	0/04/05	A	36,000	<500	<500	<500	<500
AMW-2	6/21/95	Augeas	Well abandone		ļ.	7300	4000
(continued)	9/12/95	Augeas	Vveii apandone	d daming site i			
AMW-3	11/28/94	Augeas	22	· <0.5	<0.5	<0.5	<0.5
(Shallow Zone)	3/23/95	Augeas	45	<5.0	<5.0	<5.0	<5.0
	6/21/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	9/12/95	Augeas	Well abandone	ed during site r	emediation I		
AMW-4	5/15/95	Augeas	2,400	<50	<50	<50	<50
(Shallow Zone)	6/21/95	Augeas	2,500	<50	<50	<50	<50
(Shallow Zone)	9/13/95	Augeas	1,100	<25	<25	<25	<25
	4/16/96	PES	1,200	10	<10	<10	<40
	7/17/96	PES	860	<10	<10	<10	<40
AMW-5	5/15/95	Augeas	1.2	<0.5	<0.5	<0.5	<0.5
(Shailow Zone)	6/21/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
*	9/12/95	Augeas	<0.5	<0.5	<0.5	<0.5	<0.5
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	<2
	7/17/96	PES	0.6	<0.5	<0.5	<0.5	<2
AMW-6	9/13/95	Augeas	930	<25	<25	<25	<25
(Shallow Zone)	4/16/96	PES	1,900	110	20	<10	<40
(Onanow Zone)	7/17/96	PES	3,300	280	<30	<30	<100
	04005		0.050	340	<25	<25	<25
AMW-7	9/12/95	Augeas	2,350		2,200	60	<100
(Shallow Zone)	4/16/96	PES	2,300	500	2,200	<30	<100
	7/17/96	PES	2,400	530	2,100	<30	100
8-WMA	9/11/95	Augeas	95	<25	<25	<25	<25
(Deep Zone)	4/16/96	PES	0.8	<0.5	<0.5	<0.5	<2
, , ,	7/17/96	PES	1.6	<0.5	<0.5	<0.5	<2
AMW-9	9/13/95	Augeas	170	<25	<25	<25	<25
	4/16/96	PES	170	4	7	<3	<10
(Deep Zone)	7/17/96	PES	190	4	<3	<3	<10
,	-					.0.5	-0.5
MW-6	6/30/92	RESNA	2,400	<0.5	<0.5	<0.5	<0.5
(Deep Zone)	9/9/92	RESNA	NS	NS	NS	NS	NS NS
	11/20/92	RESNA	NS	NS	NS -0.5	NS 10.5	NS
	2/12/93	RESNA	4,200	<0.5	<0.5	<0.5	<0.5
	5/12/93	RESNA	3,500	<0.5	<0.5	<0.5	<0.5
	8/18/93	RESNA	3,000	<0.5	<0.5	<0.5	<0.5
	11/10/93	RESNA	3,900	<0.5	<0.5	<0.5	<0.5
	2/4/94	RESNA	2,900	<50	<50	<0.5	<0.5 <0.5
	5/2/94	RESNA	2,000	<50	<50	<0.5	1 (0.5

Table 3. Summary of Analytical Results for Groundwater Samples Through July 1996

Former Young's Cleaners Foothill Square Shopping Center Oakland, California

Well	Date	Sampled	Concent	rations expre	ssed in micro	grams per lite	(µg/L)
Number	Sampled	by	PCE	TCE	c-1,2-DCE	t-1,2-DCE	Freon-12
							40 E
MW-6	8/3/94	RESNA	1,400	<50	<50	<0.5	<0.5
(continued)	12/6/94	EMCON	2,000	<50	<50	<0.5	<0.5
	3/11/95	EMCON	1,300	<20	<20	<0.5	-
	6/5/95	EMCON	2,000	<20	<20	<20	-
	8/29/95	EMCON	1,300	<20	<20	<20	_
	9/11/95	Augeas	2,000	<50	<50	<50	<50
	11/16/95	EMCON	1,300	<20	<20	<20	_
	2/28/96	EMCON	960	<20	<20	<20	-
	4/16/96	PES	1,400	10	<10	<10	100
	5/28/96	EMCON	970	<20	<20	<20	_
	7/17/96	PES	590	<5	<5	<5	30
MW-7	6/30/92	RESNA	<1000	<1000	<1000	<1000	<1000
(Shallow Zone)	9/9/92	RESNA	4	well contained i	, floating produc	t	
(Silalicit zolic)	11/20/92	RESNA			floating produc		
	2/12/93	RESNA			floating produc		
	5/12/93	RESNA			floating produc		
	8/18/93	RESNA			floating produc		
	11/10/93	RESNA				ell during purgi	ng
	2/4/94	RESNA	<50	<50	<50	<50	<50
	5/2/94	RESNA	<50	<50	<50	<50	<50
	8/3/94	RESNA	<50	<50	<50	<50	<50
	12/6/94	EMCON	<50	<50	<50	<50	<50
	3/11/95	EMCON		loating product	entering the w	ell during purgi	ng
	6/5/95	EMCON	<10	<10	<10	<10	<10
	8/29/95	EMCON	<10	<10	<10	<10	j –
	9/11/95	Augeas	85	<50	<50	<50	<50
	11/16/95	EMCON	<20	<20	<200	<200	-
	2/28/96	EMCON	<10	<10	<10	<10	-
	4/16/96	PES	<0.5	<0.5	<0.5	<0.5	8
	5/28/96	EMCON	<10	<10	<10	<10	-
	7/17/96	PES	<0.5	0.6	0.6	<0.5	<2

Notes:

PCE = Tetrachloroethene

TCE = Trichloroethene

c-1,2-DCE = cis-1,2-dichloroethene

t-1,2-DCE = trans-1,2-dichloroethene

Freon 12 = Dichlorodifluoromethane

WGR = Western Geologic Resources, Inc.

Augeas = Augeas Corporation

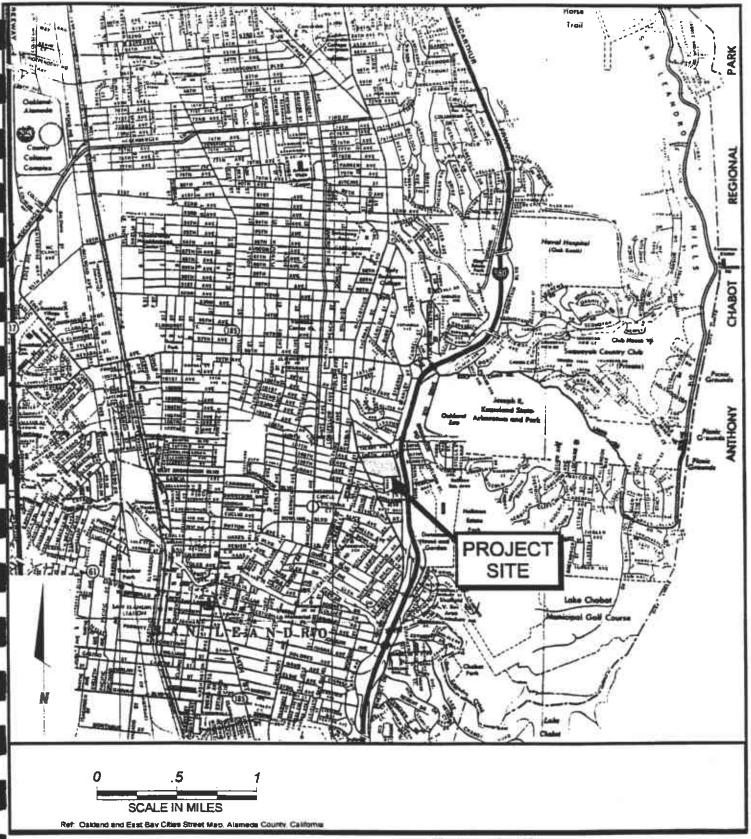
EMCON = EMCON Associates

PES = PES Environmental, Inc.

RESNA = RESNA Consultants

<0.1 = Concentration not detected at or above the indicated detection limit

NS = Not sampled because well was inaccessible





PES Environmental, Inc.

Engineering & Environmental Services

Site Location Map Foothill Square Shopping Center 10700 MacArthur Boulevard Oakland, California

1

502.0101.001

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PJS

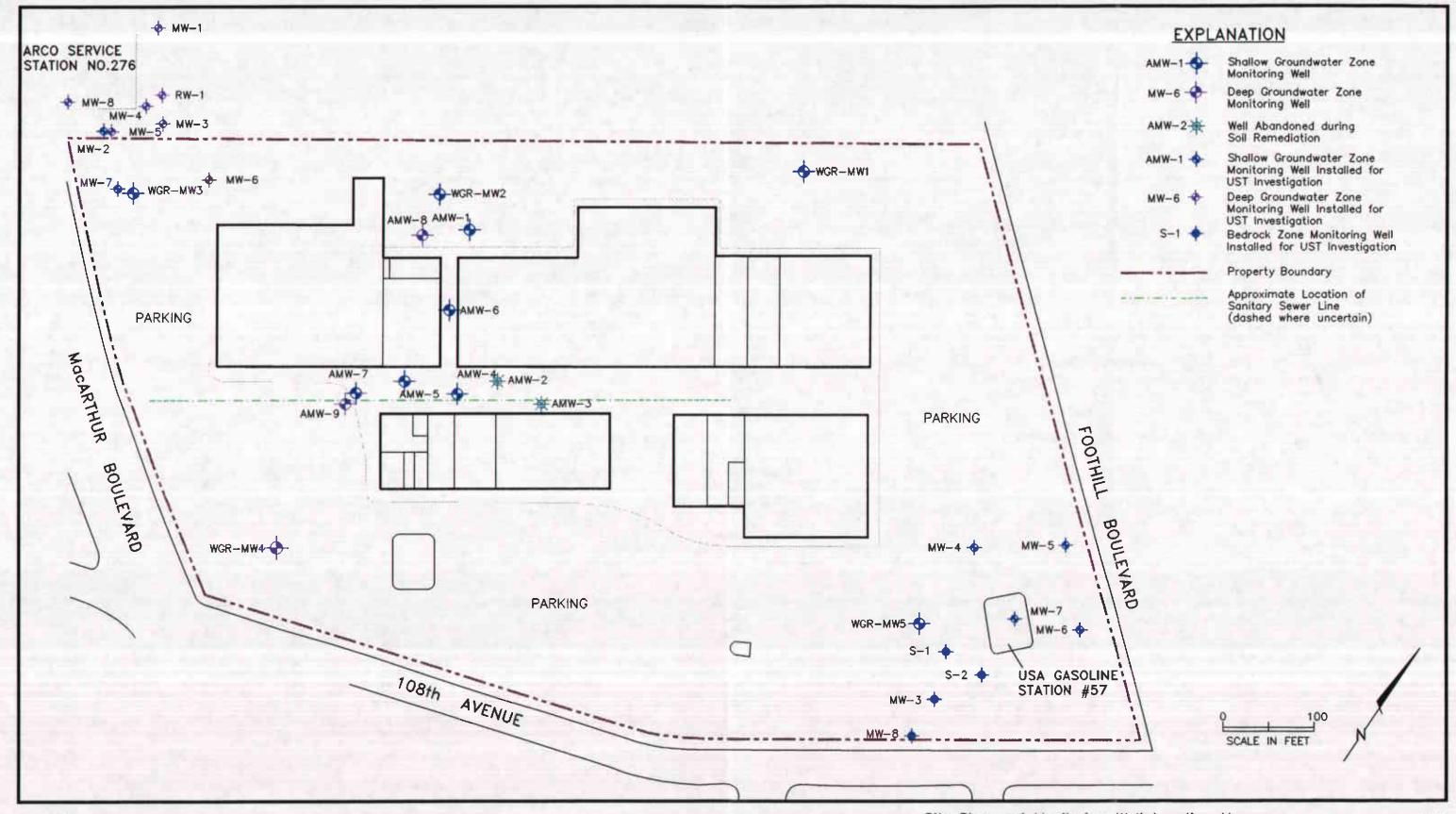
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REVIEWED BY

DATE



PES Environmental, Inc. Engineering & Environmental Services Site Plan and Monitoring Well Location Map Foothill Square Shopping Center 10700 MacArthur Boulevard Oakland, California

2

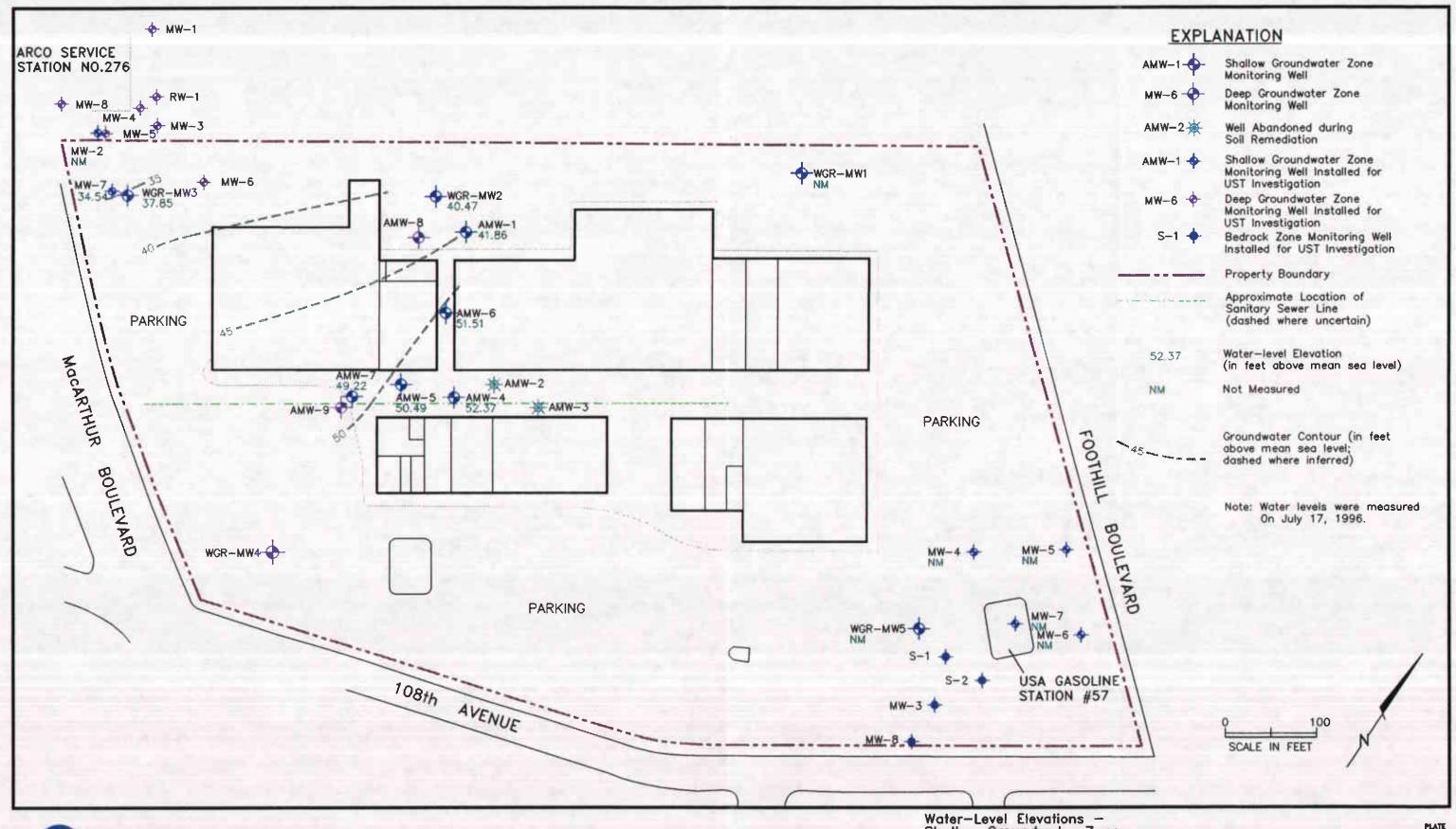
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PES Environmental, Inc.
Engineering & Environmental Services

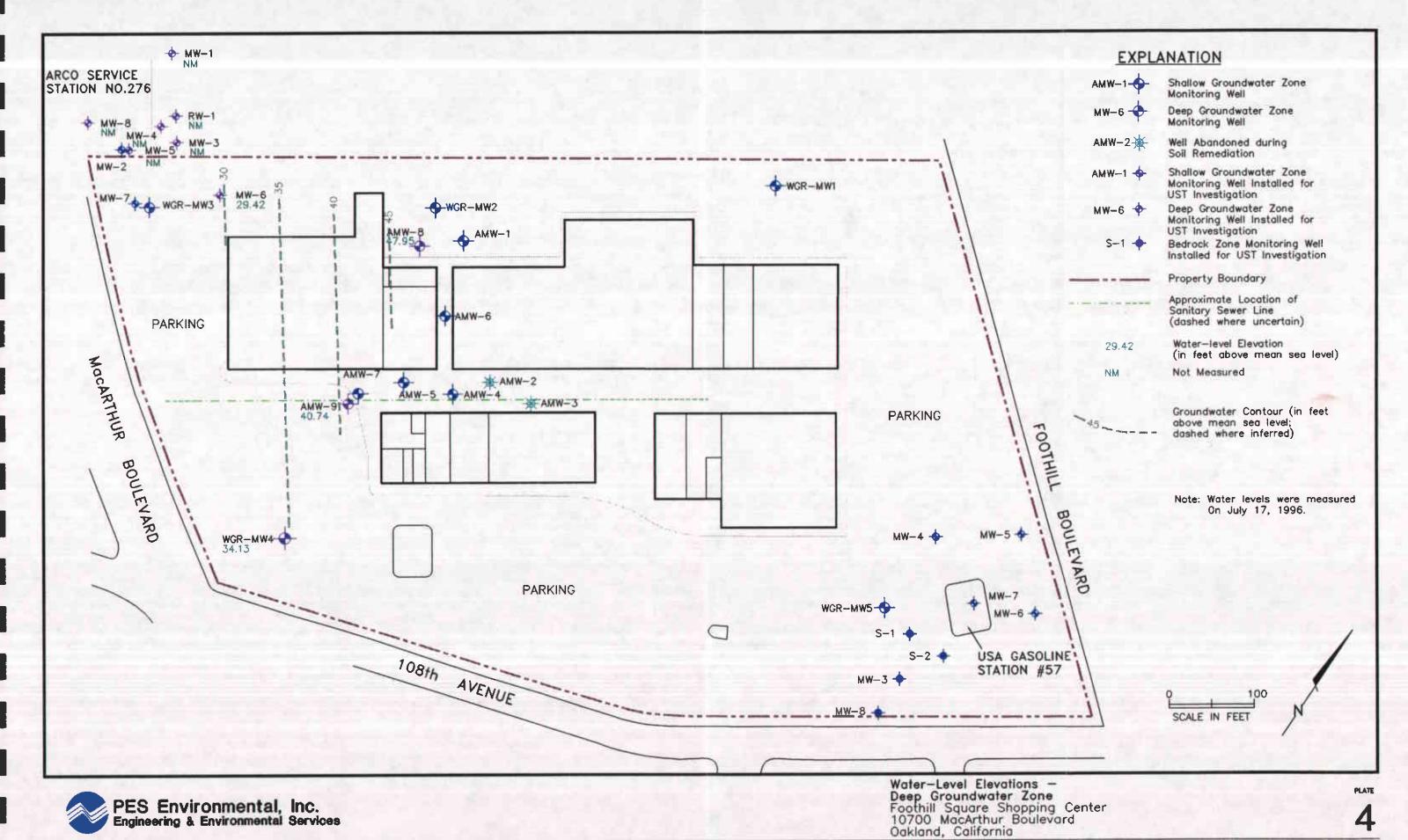
Water-Level Elevations — Shallow Groundwater Zone Foothill Square Shopping Center 10700 MacArthur Boulevard Oakland, California

3

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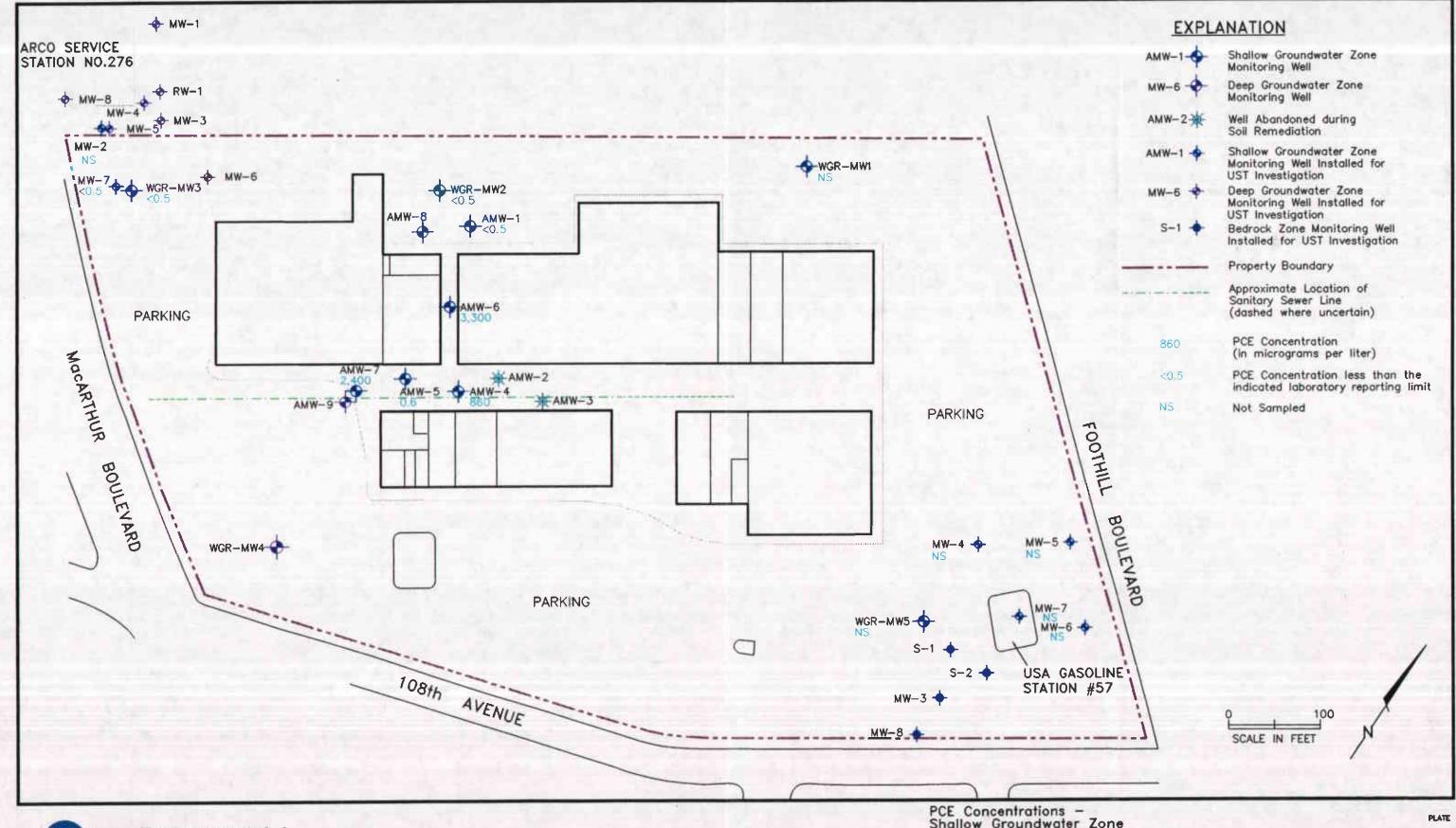
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PES Environmental, Inc. Engineering & Environmental Services Shallow Groundwater Zone
Foothill Square Shopping Center
10700 MacArthur Boulevard
Oakland, California

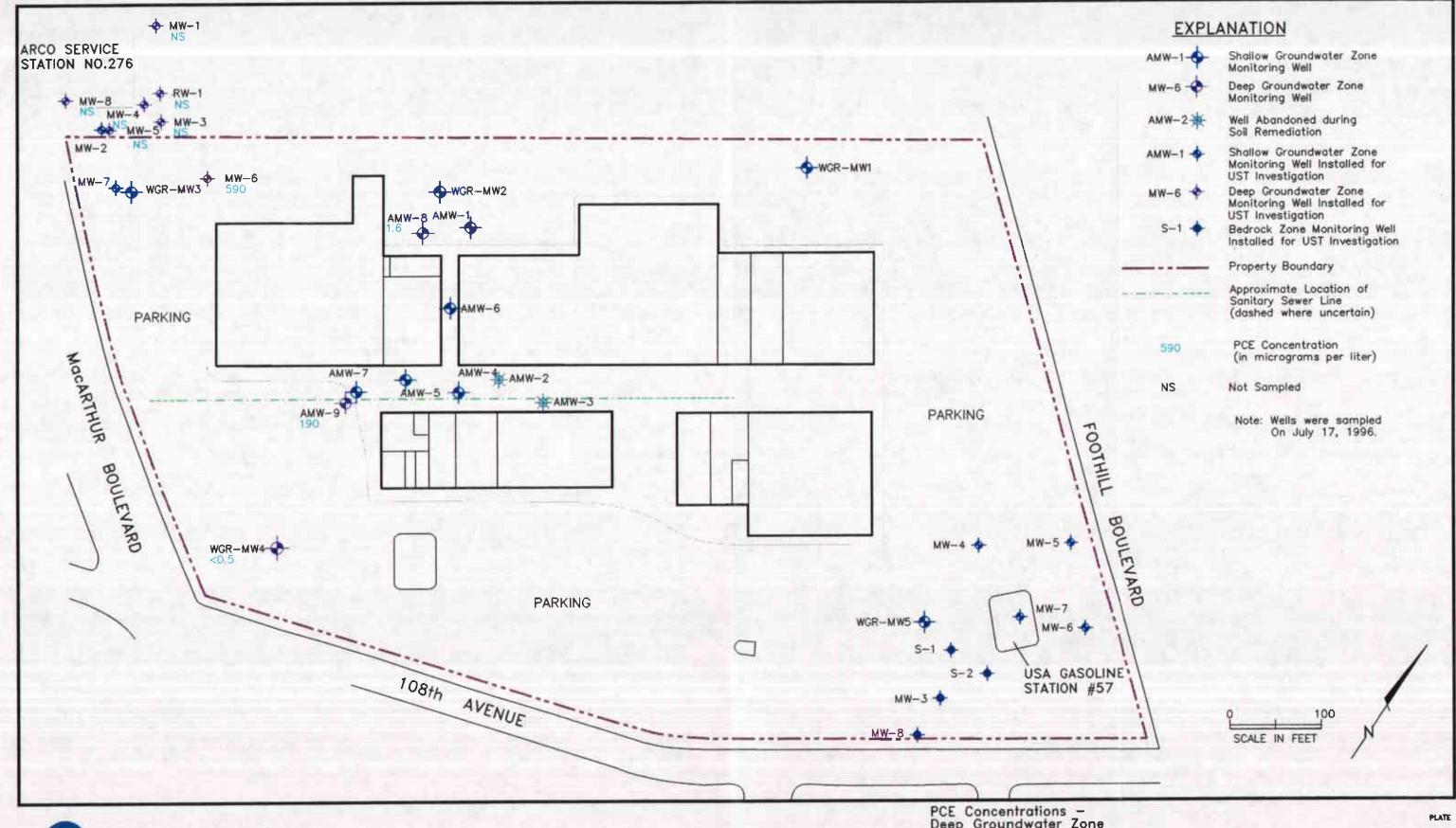
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JOB NUMBER

0100312T

REVIEWED BY



PES Environmental, Inc.
Engineering & Environmental Services

PCE Concentrations —
Deep Groundwater Zone
Foothill Square Shopping Center
10700 MacArthur Boulevard
Oakland, California

6

502.0101.003 JOB NUMBER 0100312T

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APPENDIX A

WATER-LEVEL DATA FORM



PAGE	2	OF	2	
DATE:	7/17/4	16		

WATER LEVEL DATA FORM

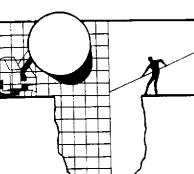
JOB NO.: 502, 0/01. 003

FIELD PERSONNEL: M. Troita(PES) Korth. brown 6/ainth

RECORDED BY: H. Take MEASURING INSTRUMENT: MEAN SEA LEVEL DATUM: STEEL TAPE OTHER-TYPE INSTRUMENT 16612 OTHER - DESCRIBE DELECTRIC SOUNDER SERIAL NO. WATER LEVEL ELEVATION DEPTH TO WATER (feet) COMMENTS REFERENCE ELEVATION (well condition, odor, WELL I.D. TIME presence of product, etc.) (teat) 3rd . 2nd (feet) 1st 37,54 MW-7 21.10 21.16 21.10 11750 58.64 WGR-MW-3 0753 20.49 20.49 20.49 32.36 32.36 32.36 MW-6 0755 61.78 63.18 2271227122.7140.47 WERMW2 0855 47.95 0838 15 22.65 41.86 0100 AHW-(B.59 13.59 13.59 51,51 09 i O 65.10 7Mh/-6 12.42 12.42 12.42 64.79 1912 14.48 14.48 14.48 50.49 C4,97 1914 AMW-5 15,12 15.02 15.02 48.46 19/6 27,74 27,74 41,5 AM4,-70918 64.24 25.89 25.89 25.81 34.13 WGRAWY 092 0 60.02 WGRHW5 4/6R-MWl

APPENDIX B

GROUNDWATER SAMPLING REPORT



BLAINE TECH SERVICES INC.

985 TIMOTHY DRIVE SAN JOSE, CA 95133 (408) 995-5535 FAX (408) 293-8773

July 26, 1996

PES Environmental, Inc. 1682 Novato Blvd., Suite 100 Novato, CA 94947

ATTN: Will Mast

Site: 10700 MacArthur Blvd. Oakland, California

Date: July 17, 1996

GROUNDWATER SAMPLING REPORT 960717-K-1

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results, or become involved with the marketing or installation of remedial systems.

This report deals with the groundwater well sampling performed by our firm in response to your request. Data collected in the course of our work at the site are presented in the TABLE OF WELL MONITORING DATA. This information was collected during our inspection, well evacuation and sample collection. Measurements include the total depth of the well and the depth to water. Water surfaces were further inspected for the presence of immiscibles. A series of electrical conductivity, pH, and temperature readings were obtained during well evacuation and at the time of sample collection.

STANDARD PRACTICES

Evacuation and Sampling Equipment

As shown in the TABLE OF WELL MONITORING DATA, the wells at this site were evacuated according to a protocol requirement for the removal of three case volumes of water, before sampling. The wells were evacuated using bailers, middleburg, and electric submersible pumps.

Samples were collected using bailers.

Bailers: A bailer, in its simplest form, is a hollow tube which has been fitted with a check valve at the lower end. The device can be lowered into a well by means of a cord. When the bailer enters the water, the check valve opens and liquid flows into the interior of the bailer. The bottom check valve prevents water from escaping when the bailer is drawn up and out of the well.

Two types of bailers are used in groundwater wells at sites where fuel hydrocarbons are of concern. The first type of bailer is made of a clear material such as acrylic plastic and is used to obtain a sample of the surface and the near surface liquids, in order to detect the presence of visible or measurable fuel hydrocarbon floating on the surface. The second type of bailer is made of Teflon or stainless steel, and is used as an evacuation and/or sampling device.

Bailers are inexpensive and relatively easy to clean. Because they are manually operated, variations in operator technique may have a greater influence than would be found with more automated sampling equipment. Also, where fuel hydrocarbons are involved, the bailer may include near surface contaminants that are not representative of water deeper in the well.

USGS/Middleburg Positive Displacement Sampling Pumps: USGS/Middleburg positive displacement sampling pumps are EPA approved pumps appropriate for use in wells down to two inches in diameter and depths up to several hundred feet. The pump contains a flexible Teflon bladder which is alternately allowed to fill with well water and then collapsed. Actuation of the pump is accomplished with compressed air supplied by a single hose to one side of the Teflon membrane. Water on the other side of the membrane is squeezed out of the pump and up a Teflon conductor pipe to the surface. Evacuation and sampling are accomplished as a continuum. The rate of water removal is relatively slow and loss of volatiles almost non-existent. There is only positive pressure on the water being sampled and there is no impeller cavitation or suction. The pumps can be placed at any location within the well, can draw water from the very bottom of the well case, and are virtually immune to the erosive effects of silt or lack of water which destroy other types of pumps.

Disadvantages associated with Middleburg pumps include their high cost, low flow rate, temperamental operation, and cleaning requirements which are both elaborate and time consuming.

Electric Submersible Pumps: Electric submersible pumps are appropriate for the high volume evacuation of wells of any depth provided the well diameter is large enough to admit the pump. Four inch and three inch diameter wells will readily accept electric submersible pumps, while two inch wells do not. In operation, the pump is lowered into the well with a pipe train above it. A checkvalve immediately above the pump and below the first section of pipe prevents water that has entered the pipe from flowing back into the well. Electricity is provided to the pump via an electrical cable and the action of the pump is to push water up out of the well.

Electric submersible pumps are often used as well evacuation devices, which are then supplanted with a more specialized sample collection device (such as a bailer) at the time of sampling. An alternative is to use the pump for both evacuation and sampling. When a bailer is used to collect the sample, interpretation of results by the consultant should allow for variations attributable to near surface contamination entering the bailer. When the electric submersible is, itself, used for sample collection it should be operated with the output restricted to a point where the loss of volatiles becomes indistinguishable from the level obtained with true sampling pumps. It should be noted that when the pump is used for both evacuation and sample collection that it is possible to perform these operations as an uninterrupted continuum. This contrasts with the variations in elapsed time between evacuation and sample collection that occur when field personnel cease one mode of operation and must bring other apparatus into use.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

Effluent Materials

The evacuation process creates a volume of effluent water which must be contained. Blaine Tech Services, Inc. will place this water in appropriate containers of the client's choice or bring new 55 gallon DOT 17 E drums to the site, which are appropriate for the containment of the effluent materials. The determination of how to properly dispose of the effluent water must usually await the results of laboratory analyses of the sample collected from the groundwater well. If that sample does not establish whether or not the effluent water is contaminated, or if effluent from more than one source has been combined in the same container, it may be necessary to conduct additional analyses on the effluent material.

Sampling Methodology

Samples were obtained by standardized sampling procedures that follow an evacuation and sample collection protocol. The sampling methodology conforms to both State and Regional Water Quality Control Board standards and specifically adheres to EPA requirements for apparatus, sample containers and sample handling as specified in publication SW 846 and T.E.G.D. which is published separately.

Sample Containers

Sample containers are supplied by the laboratory performing the analyses.

Sample Handling Procedures

Following collection, samples are promptly placed in an ice chest containing deionized ice or an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days, as jobs and projects often do.

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under our standard chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date and signature of person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to American Environmental Network in Pleasant Hill, California. AEN is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory, and is listed as DOHS HMTL #1172.

Personnel

All Blaine Tech Services, Inc. personnel receive 29 CFR 1910.120(e)(2) training as soon after being hired as is practical. In addition, many of our personnel have additional certifications that include specialized training in level B supplied air apparatus and the supervision of employees working on hazardous materials sites. Employees are not sent to a site unless we are confident they can adhere to any site safety provisions in force at the site and unless we know that they can follow the written provisions of an SSP and the verbal directions of an SSO.

In general, employees sent to a site to perform groundwater well sampling will assume an OSHA level D (wet) environment exists unless otherwise informed. The use of gloves and double glove protocols protects both our employees and the integrity of the samples being collected. Additional protective gear and procedures for higher OSHA levels of protection are available.

Reportage

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody and the certified analytical report issued by the Hazardous Materials Testing Laboratory.

The following addresses have been listed here for your convenience:

Water Quality Control Board San Francisco Bay Region 2101 Webster Street 5th Floor Oakland, CA 94612 ATTN: John West

Oakland Fire Prevention Bureau One City Hall Plaza Oakland, CA 94612 ATTN: Stanley Y. Chi Please call if we can be of any further assistance.

Richard C. Blaine

RCB/mc

attachments: table of well monitoring data

chain of custody

TABLE OF WELL MONITORING DATA

Well I.D. Date Sampled	AMW-1 07/17/96	AMW-4 07/17/96		AMW-5 07/17/96	AHW-6 07/17/96
Well Diameter (in.) Total Well Depth (ft.) Depth To Water (ft.) Free Product (in.) Reason If Not Sampled	2 33.95 22.68 NONE	2 24.59 15.46 NONE		2 30.15 14.45 NONE	2 25.02 13.57 NONE
1 Case Volume (gal.) Did Well Dewater? Gallons Actually Evacuated	1.8 NO 5.5	1.4 NO 4.5		2.5 NO 7.5 BAILER	1.8 NO 5.5 BAILER
Purging Device Sampling Device	BAILER BAILER	BAILER BAILER		BAILER	BAILER
Time Temperature (Fahrenheit) pH Conductivity (micromhos/cm) Nephelometric Turbidity Units	10:05 10:08 66.6 67.0 7.3 7.1 1700 1600 >200 >200	67.0 62.6 6 7.0 7.4 7 1600 1700 1	2:18 12:21 3.4 64.0 .1 7.0 600 1700 200 >200	11:55 11:59 12:03 67.0 68.6 68.6 7.0 7.0 7.0 1700 1700 1700 >200 >200 >200	09:35 09:39 09:43 65.0 64.8 65.0 7.0 7.0 7.0 2000 2000 2000 >200 >200 >200
BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis	960717-K-1 AMW-1 AEN EPA 8010	960717-K-1 AMW-4 AEN EPA 8010		960717-K-1 AMW-5 AEN EPA 8010	960717-K-1 AMW-6 AEN EPA 8010

TABLE OF WELL MONITORING DATA

Well I.D. Date Sampled	AMW-7 07/17/96		AMW-8 07/17/96			AMW-9 07/17/96			MW-6 07/17/96		
Well Diameter (in.) Total Well Depth (ft.) Depth To Water (ft.)	2 24.76 15.00		2 48.44 16.60			2 54.28 22.69			2 49.02 32.32		
Free Product (in.) Reason If Not Sampled	NONE		none 			NONE 			NONE 		
1 Case Volume (gal.) Did Well Dewater? Gallons Actually Evacuated	1.5 NO 4.5		5.1 NO 15.5	•		5.1 NO 15.5			NO 8.5		
Purging Device	BAILER		MIDDLEB	URG		MIDDLEB BAILER	URG		MIDDLEBU BAILER	RG	
Time Temperature (Fahrenheit) pH Conductivity (micromhos/cm)	11:33 11:36 70.2 68.8 6.7 6.8 1200 1100 >200 >200	11:38 68.6 6.8 1200 >200	DAILER 09:03 65.4 7.5 480 >200	09:09 66.2 7.6 380 >200	09:15 66.0 7.6 390 >200	11:06 68.6 6.8 1700 86.4	11:14 68.0 6.8 1600 51.2	11:21 68.4 6.8 1600 44.7	08:36 64.6 6.7 1400 >200	08:39 65.2 6.8 1500 123.7	08:42 65.6 6.8 1500 76.6
Nephelometric Turbidity Units BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis	960717-K-1 AMW-7 AEN EPA 8010		960717 AMW-8 AEN EPA 80			960717 AMW-9 AEN EPA 80			960717- MW-6 AEN EPA 801		

TABLE OF WELL MONITORING DATA

Well I.D. Date Sampled	MW-7	WGR/MW-2	WGR/MW-3*	WGR/MW-4
	07/17/96	07/17/96	07/17/96	07/17/96
Well Diameter (in.) Total Well Depth (ft.) Depth To Water (ft.)	2	4	4	4
	36.62	27.96	26.93	44.93
	21.06	22.70	20.96	25.85
Free Product (in.) Reason If Not Sampled	NONE 	NONE	NONE 	NONE
1 Case Volume (gal.) Did Well Dewater? Gallons Actually Evacuated	2.5	3.4	3.9	12.4
	NO	NO	NO	NO
	7.5	12.0	12.0	39.0
Purging Device Sampling Device	MIDDLEBURG/ ELECTRIC SUBMERSIBLE BAILER	ELECTRIC SUBMERSIBLE BAILER	ELECTRIC SUBMERSIBLE BAILER	ELECTRIC SUBMERSIBLE BAILER
Time Temperature (Fahrenheit) pH Conductivity (micromhos/cm)	07:45 07:48 07:51 67.2 67.0 67.4 6.6 6.5 6.6 1000 680 670 >200 >200 120.2	10:20 10:23 10:25 67.4 68.0 68.2 7.2 7.2 7.2 1400 1400 1400 198.5 >200 41.7	08:15 08:17 08:20 67.2 67.8 67.8 6.6 6.4 6.4 600 580 580 68.1 146.1 >200	10:44 10:46 10:47 70.6 71.8 71.6 6.7 6.6 6.6 1000 940 980 80.5 102.8 74.6
Nephelometric Turbidity Units BTS Chain of Custody BTS Sample I.D. DOHS HMTL Laboratory Analysis	960717-K-1	960717-K-1	960717-K-1	960717-K-1
	MW-7	WGR-MW2	WGR-MW3	WGR-MW4
	AEN	AEN	AEN	AEN
	EPA 8010	EPA 8010	EPA 8010	EPA 8010

^{*} Sample EB is an equipment blank taken before sampling WGR/MW-3 and after sampling MW-7.

	FIMC HIVE		DUCTANALYS	DETECTION	ILAB / PEN			0
BLAINE	SAN JOSE, CA 95133 (408) 995-5535				ALL ANALYSES MUST M SET BY CALIFORNIA DI	EET SPECIFIC	ATIONS AND DE	TECTION LIMITS
TECH SERVICES INC.	FAX (408) 293-8773				□ EPA		☐ AWQCB R	EGION
CHAIN OF CUSTODY					LIA			
960717-1	/	SES			Потнея	10		77
CLIENT PES ENVIROND	Mental-	NA	1 1 1		SPECIAL INSTRUCTION	STADO	oke of	KEPPE
SITE FOOTHILL SQUARE Shi	poing lever	CONTAIN			to 165	ENUI	PON MIC	Prison.
15 To Mar Awhor	Wid.	甘	1 1 1		SPECIAL INSTRUCTION A PES AHAI; Je	i44(/)	4/1/1	
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	ATRIX CONTAINERS	SOMPOSIT			Project #	: 507	2,010,	1,003
Ö		" 150			ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
SAMPLE I.U.	TOTAL					_		
UBR-MWZ 1035	√ 3	- {} 						
WER-MW3 830	{ 	- {}						
WER-MW4 WS5	1 1 1					•	 	
AMW1 1015		- X		 				1
AMW4 /225								
7.741.52							_	
AMW7 1145	-\- -\-							
ANW8 925		+	- - -	 				
ANW9 1125	<u>" </u>		1 2	<u> </u>	RESULTS NEEDED	//.	· la el	TAT
	SAMPLING PERFORMED BY	Keizh	/20m	<u> </u>	NO LATER THAN	STAN	DATE L	TIME
RELEASED BY	1 DATE	F 1/6-/ 1	1420	RECEIVED BY	The Julia		7/18/96	1420
RELEASED BY	DAT		TIME	AECEIVED BY			DATE	TIME
RELEASED BY	DAT	E T	ТІМЕ	RECEIVED BY			DATE	TIME
Introduce a.			THE CELT	LCOOLER #		<u></u>		
SHIPPED VIA	DAT	E SENT	TIME SENT	COOLER#				. }

BLAINE TECH SERVICES INC.	SAN JOSE, CA 9 (408) 995- FAX (408) 293-	5535	CO	MDUCI	ANALYSIS	TO DET		ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND PA RWQCB REGION
SAMPLE I.D.		SITE ALL O	XXXX BOID					SPECIAL INSTRUCTIONS INVOICE of Report TO PES ENVIRONMENTAL. ALLY HAN PROJECT #: 502,0/01,003 ADDIL INFORMATION STATUS CONDITION LAB SAMPLE #
SAMPLING DATE TIME COMPLETED 7/7/46 /3cx RELEASED BY RELEASED BY RELEASED BY	SAMPLING PERFORMED BY	DATE DATE	18/46	TIME		RECEIV	ED BY	DATE TIME
SHIPPED VIA		DATE S	ENT	TIME S	ENT	COOLER	H.	

APPENDIX C

LABORATORY REPORT
AND
CHAIN-OF-CUSTODY RECORDS

American Environmental Network

Certificate of Analysis

OHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

RECEIVED JUL 3 1 1996

PES ENVIRONMENTAL, INC. 1682 NOVATO BLVD. SUITE 100 NOVATO, CA 94947

ATTN: JENNY HAN

CLIENT PROJ. ID: 502.0101.003 CLIENT PROJ. NAME: FOOTHILL SQ.

C.O.C. NUMBER: 960717-K1

REPORT DATE: 07/29/96

DATE(S) SAMPLED: 07/17/96-07/18/96

DATE RECEIVED: 07/18/96

AEN WORK ORDER: 9607225

PROJECT SUMMARY:

On July 18, 1996, this laboratory received 14 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

ar**¢**∦ Klein

Laboratory Director

SAMPLE ID: WGR-MW2
AEN LAB NO: 9607225-01
AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96 REPORT DATE: 07/29/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

SAMPLE ID: WGR-MW3 AEN LAB NO: 9607225-02 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96 REPORT DATE: 07/29/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

SAMPLE ID: WGR-MW4 AEN LAB NO: 9607225-03 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96 REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
EPA 8010 - Water matrix El Bromodichloromethane Bromoform	PA 8010 75-27-4 75-25-2	ND ND	0.5 ug/L 0.5 ug/L	07/20/96 07/20/96
Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane	74-83-9 56-23-5 108-90-7 75-00-3	ND ND ND ND	0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L	07/20/96 07/20/96 07/20/96 07/20/96
2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	110-75-8 67-66-3 74-87-3 124-48-1	ND ND ND ND	0.5 ug/L 0.5 ug/L 2 ug/L 0.5 ug/L	07/20/96 07/20/96 07/20/96 07/20/96 07/20/96
1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene Dichlorodifluoromethane	95-50-1 541-73-1 106-46-7 75-71-8	ND ND ND ND	0.5 ug/L 0.5 ug/L 0.5 ug/L 2 ug/L 0.5 ug/L	07/20/96 07/20/96 07/20/96 07/20/96
1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene	75-34-3 107-06-2 75-35-4 156-59-2	ND ND ND ND	0.5 ug/L 0.5 ug/L 0.5 ug/l	07/20/96 07/20/96 07/20/96
trans-1.2-Dichloroethene 1.2-Dichloropropane cis-1.3-Dichloropropene trans-1.3-Dichloropropene	156-60-5 78-87-5 10061-01-5 10061-02-6	ND ND ND ND	0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L	07/20/96 07/20/96 07/20/96 07/20/96 07/20/96
Methylene Chloride 1.1.2.2-Tetrachloroethane Tetrachloroethene 1.1.1-Trichloroethane	75-09-2 79-34-5 127-18-4 71-55-6	ND ND ND ND	2 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L	07/20/96 07/20/96 07/20/96
1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1.1.2Trichlorotrifluoroethane Vinyl Chloride	79-00-5 79-01-6 75-69-4 76-13-1 75-01-4	ND ND ND ND	0.5 ug/L 0.5 ug/L 2 ug/L 0.5 ug/L 2 ug/L	07/20/96 07/20/96 07/20/96 07/20/96 07/20/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

SAMPLE ID: AMW1

AEN LAB NO: 9607225-04 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ND = Not detected at or above the reporting limit

^{* =} Value at or above reporting limit

SAMPLE ID: AMW4

AEN LAB NO: 9607225-05

AEN WORK ORDER: 9607225 CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloropropene trans-1,3-Dichloropropene etis-1,3-Dichloropropene trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene 1,1,1-Trichloroethane Trichloroethene Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane	A 8010 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6 79-00-5 79-01-6 75-69-4 76-13-1 75-01-4	NO N	10 U 40 U 10 U 10 U 10 U 10 U 10 U 10 U 10 U 1	9/L 9g/L 9g/L 1g/L 1g/L 1g/L 1g/L 1g/L 1g/L 1g/L	07/24/96 07/24/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

PES ENVIRONMENTAL, INC.

SAMPLE ID: AMW5 AEN LAB NO: 9607225-06 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96 **REPORT DATE: 07/29/96**

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

SAMPLE ID: AMW6

AEN LAB NO: 9607225-07

AEN WORK ORDER: 9607225 CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

SAMPLE ID: AMW7

AEN LAB NO: 9607225-08 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96
DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
EPA 8010 - Water matrix Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene Dichlorodifluoromethane 1.1-Dichloroethane 1.1-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloropropene trans-1.3-Dichloropropene etis-1.3-Dichloropropene trans-1.3-Dichloropropene Methylene Chloride 1.1.2.2-Tetrachloroethane Tetrachloroethene 1.1.1-Trichloroethane Trichloroethene Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane	75-27-4 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6 79-00-5 79-01-6 75-69-4 76-13-1 75-01-4	ND N	30 ug/L 30 ug/L 30 ug/L 30 ug/L 100 ug/L 30 ug/L 30 ug/L 30 ug/L	07/24/96 07/24/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

SAMPLE ID: AMW8

AEN LAB NO: 9607225-09

AEN WORK ORDER: 9607225 CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96

DATE RECEIVED: 07/18/96 REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
EPA 8010 - Water matrix Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene	PA 8010 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8	ND ND ND ND ND ND ND ND ND ND ND ND	0.5 ug/L 0.5 ug/L 2 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L	07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96
Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Methylene Chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,1,2Trichlorotrifluoroethane Vinyl Chloride	75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6 79-00-5 79-01-6 75-69-4	ND ND ND ND ND ND ND ND ND ND ND ND ND N	0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 0.5 ug/L 2 ug/L 0.5 ug/L	07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96

ND = Not detected at or above the reporting limit

^{* =} Value at or above reporting limit

SAMPLE ID: AMW9

AEN LAB NO: 9607225-10 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane	A 8010 75-27-4 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6 79-01-6 75-69-4 76-13-1 75-01-4		3 ug/L 3 ug/L 10 ug/L 3 ug/L 3 ug/L 3 ug/L 10 ug/L 10 ug/L 3 ug/L 3 ug/L 10 ug/L 10 ug/L 10 ug/L 10 ug/L	07/24/96 07/24/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

SAMPLE ID: MW6

AEN LAB NO: 9607225-11

AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Bromodichloromethane	A 8010 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6 79-00-5 79-01-6 75-69-4 76-13-1 75-01-4		5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	ハルハルルルルルルルルルルルルルルルルルルルルルルルルルルルルルルルルルルルル	07/24/96 07/24/96

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

PES ENVIRONMENTAL, INC.

SAMPLE ID: MW7

AEN LAB NO: 9607225-12

AEN WORK ORDER: 9607225 CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix E Bromodichloromethane	PA 8010 75-27-4	ND	0.5 u	g/L	07/22/96
Bromoform	75-25-2	ND	Ո 5 ս	a/l	07/22/96
Bromomethane	74-83-9	ND	0.5 u 0.5 u 0.5 u	g/L	07/22/96
Carbon Tetrachloride	56-23-5	ND	0.5 u	g/L g/L	07/22/96 07/22/96
Chlorobenzene	1 08-90- 7 75-00-3	ND ND	0.5 u	g/L a/l	07/22/96
Chloroethane 2-Chloroethyl Vinyl Ether	110-75-8	ND ND	0.5 u	g/ L a/i	07/22/9
Chloroform	67-66-3	ND	0.5 u	g/L	07/22/9
Chloromethane	74-87-3	ND	2 u	g/L	07/22/9
Dibromochloromethane	124-48-1	ND	0.5 น	g/L	07/22/9
1.2-Dichlorobenzene	95-50-1	ND	0.5 u	g/L	07/22/9
1.3-Dichlorobenzene	541-73-1	ND	0.5 u	g/L	07/22/9 07/22/9
1.4-Dichlorobenzene	106-46-7	ND ND	0.5 u	<u>ب</u> را	07/22/9
Dichlorodifluoromethane 1.1-Dichloroethane	75-71-8 75-34-3	DN	0.555555555555555555555555555555555555	g/L ig/l	07/22/9
1.2-Dichloroethane	107-06-2	ND	0.5 u	a/l	07/22/9
1,1-Dichloroethene	75-35-4	ND	0.5 u	g/L	07/22/9
cis-1,2-Dichloroethene	156-59-2	0.6 *	0.5 u	ığ/L	07/22/9
trans-1.2-Dichloroethene	156-60-5	ND	0.5 u	ıġ/L	07/22/9
1,2-Dichloropropane	7 8 -87-5	ND	0.5 u	ıg/L	07/22/9
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 u	ig/L	07/22/9 07/22/9
trans-1,3-Dichloropropene	10061-02-6	, ND	0.5 0	Ig/L Ig/l	07/22/9
Methylene Chloride	75-09-2 79-34-5	ND ND	0.5 u 0.5 u	ig/L ig/l	07/22/9
1.1.2.2-Tetrachloroethane Tetrachloroethene	127-18-4	ND	0.5 0	197 L 10/l	07/22/9
1,1,1-Trichloroethane	71-55-6	ND	0.5 i	ia/L	07/22/9
1.1.2-Trichloroethane	79-00-5	ND	0.5 เ	ıq/L	07/22/9
Trichloroethene	79-01-6	0.6 *	์ 0.5 เ	ıq/L	07/22/9
Trichlorofluoromethane	75-69-4	ND	2ι	ıq/L	07/22/9
1.1.2Trichlorotrifluoroethane	76-13-1	ND	0.5 נ		07/22/9 07/22/9
Vinyl Chloride	75-01-4	ND	2ι	ıg/L	0//22/

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

PES ENVIRONMENTAL, INC.

SAMPLE ID: EB

AEN LAB NO: 9607225-13 AEN WORK ORDER: 9607225

CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/17/96

DATE RECEIVED: 07/18/96 **REPORT DATE: 07/29/96**

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Methylene Chloride	CAS# 75-27-4 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2	RESULT ND	0.5 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	g/L g/L g/L g/L g/L ggggggggggggggggggg	
1.1.2.2-Tetrachloroethane Tetrachloroethene 1.1.1-Trichloroethane 1.1.2-Trichloroethane Trichloroethene Trichlorofluoromethane 1.1.2Trichlorotrifluoroethane Vinyl Chloride	79-34-5 127-18-4 71-55-6 79-00-5 79-01-6 75-69-4 76-13-1 75-01-4	ND ND ND ND ND ND	0.5 ເ	197 L	07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96 07/22/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

SAMPLE ID: TB

AEN LAB NO: 9607225-14

AEN WORK ORDER: 9607225 CLIENT PROJ. ID: 502.0101.003

DATE SAMPLED: 07/18/96 DATE RECEIVED: 07/18/96

REPORT DATE: 07/29/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT UNITS	DATE ANALYZED
EPA 8010 - Water matrix Bromodichloromethane Bromoform Bromomethane Carbon Tetrachloride Chlorobenzene Chloroethane 2-Chloroethyl Vinyl Ether Chloroform Chloromethane Dibromochloromethane 1.2-Dichlorobenzene 1.3-Dichlorobenzene 1.4-Dichlorobenzene Dichlorodifluoromethane 1.1-Dichloroethane 1.1-Dichloroethane 1.1-Dichloroethene cis-1.2-Dichloroethene trans-1.2-Dichloropropane cis-1.3-Dichloropropene trans-1.3-Dichloropropene Methylene Chloride 1.1.2.2-Tetrachloroethane Tetrachloroethene 1.1.1-Trichloroethane Trichloroethene Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane Trichlorofluoromethane	A 8010 75-27-4 75-25-2 74-83-9 56-23-5 108-90-7 75-00-3 110-75-8 67-66-3 74-87-3 124-48-1 95-50-1 541-73-1 106-46-7 75-71-8 75-34-3 107-06-2 75-35-4 156-59-2 156-60-5 78-87-5 10061-01-5 10061-02-6 75-09-2 79-34-5 127-18-4 71-55-6 79-01-6 75-69-4 76-13-1 75-01-4		0.5 ug/L 0.5 ug/L	07/20/96 07/20/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA) QUALITY CONTROL REPORT

AEN JOB NUMBER: 9507225

CLIENT PROJECT ID: 502.0101.003

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

<u>Definitions</u>

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

- D: Surrogates diluted out.
- #: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9507225 INSTRUMENT: G, I. MATRIX: WATER

${\tt Surrogate \ Standard \ Recovery \ Summary}$

			Percent Recovery						
Date Analyzed	Client Id.	Lab Id.	Bromochloro- methane	1-Bromo-3-chloro- propane					
07/20/96 07/20/96 07/20/96 07/20/96 07/24/96 07/22/96 07/24/96 07/22/96 07/24/96 07/22/96 07/22/96 07/22/96 07/22/96	WGR-MW2 WGR-MW3 WGR-MW4 AMW1 AMW4 AMW5 AMW6 AMW7 AMW8 AMW9 MW6 MW7 EB TB	01 02 03 04 05 06 07 08 09 10 11 12 13	79 88 77 78 73 84 83 95 82 88 84 92 92	88 87 87 87 87 81 90 91 87 103 93 84 86 86					
QC Limits:			70-130	70-130					

BLAINE -	905 TIMOTTA D		C	ONDUCT A	NALYSIS	TO DETEC	ī	ILAB HEN	960	V2-725	IDHS#	
TECH SERVICES INC.	SAN JOSE, CA 9 (408) 995 FAX (408) 293	-5535						ALL ANALYSES MUST N SET BY CALIFORNIA DI	MEET SPECIFI HS AND	CATIONS AND		
CHAIN OF CUSTODY			}					☐ EPA		□RWQCE	REGION	
960717	1-161	ERS						□ LIA □ OTHER				
CLIENT PES ENVIEON	LIENT PES ENVIEONMENTAL							SPECIAL INSTRUCTION	NS FAU	oke s	1 Popart	
SITE FOOTBILL SQUARE Shapping CENER					ļ			SPECIAL INSTRUCTION SPECIAL INSTRUCTION	ENU	ZON M	ien lat	
10700 MACANAU	10700 MACAWhor Blud.								1444		,	
OALLAND, C.	A.	SET IN							, ,	502,0101,003		
	MATRIX CONTAINE 당원	COMPOSITE	12					Project #	. 50%	2,010	1,003	
SAMPLE I.D.	ω≥ IOTAL	Ů						ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #	
WER-MWZ 1035	W/ 3		X							_	OLAC	
WER-MW3 830			X						,		O2AC	
NGR-MW4 6055			X			_				(13AC	
AMW1 1015			X			_					DYAC	
AMW4 1225			X							- ()SA C	
AMWS 1210			X				_				MAC.	
AMW6 950			X							<u> </u>	27A.C.	
AMW7 1145			X							-	<u> 284 C</u>	
AMW 8 925			X						·		194C	
Areng 1125	1 4		X								DA-C	
SAMPLING DATE TIME COMPLETED 7/17/96 (3:20)	SAMPLING PERFORMED BY	1	- - 12 L	1 B	اساس		•	RESULTS NEEDED NO LATER THAN	Stano	dard	TAT	
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RELEASED BY		DATE		TIME	•	RECEIVED	ÐΥ			DATE	TIME	
SHIPPED VIA		DATE SE	NT	TIME SEN	T C	OOLER #						
		1		<u></u>								

BLA	ME		IMC SAN JOS	DE, CA 95133	-		COND	OUCT A	MALY	SIS TO	D DETE	CT		ILAB MEN	400	7775	DHS #	
TECH SERVICES INC. (408) 995-5535 FAX (408) 293-8773													ALL ANALYSES MUST SET BY CALIFORNIA	MEET SPECIF!	CATIONS AN	D DETECTION LIMITS	5	
CLIENT Dec 507/7-16/												□EPA □LIA □OTHER			CB REGION	_		
SITE FOOTHILL SQUARE Shaping Center			CONTAINER									SPECIAL INSTRUCTION ALLAN: J.	ONS FAU	OKE C	of Report	F		
10700 1	10700 MACANTON Blud.			EALL									AHAI: Ja	2444	HARI	er en lec	~,#	
OACC	ANA, C	MATRIX MATRIX SOIL MATRIX NO.	COI	NTAINERS	COMPOSIT	3010								Project #	£:502	2.01	01,003	
SAMPLE I.D.		ທ≯	TOTAL		نً	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\								ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #	_
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NOVEMBER 19, 1996

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