

Commanding Officer
U. S. Coast Guard
Civil Engineering Unit Oakland

2000 Embarcadero Suite 200 Oakland, CA 94606-5337 (510) 535-7200

5090 14 July, 1995

Ms. Juliet Shin Alameda County UST Local Oversight Program 1131 Harbor Bay Parkway Alameda, CA 93940

Dear Ms. Shin:

The enclosed Quarterly Monitoring Well Sampling and Analysis Report for the Exchange and Swimming Pool locations at U.S. Coast Guard Support Center Alameda is provided for your review. This submittal is the third of four sampling events requested in your letter of March 23, 1994.

Please contact Mr. Louis Rivero at (510) 535-7275 if you have any questions or require additional information.

Sincerely,

DAVE STALTERS

Chief, Environmental Division

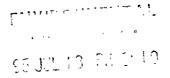
U.S. Coast Guard

By direction of the Commanding Officer

Encl: (1) Quarterly Monitoring Well Sampling and

Analysis Second Quarter 1995

Copy: Tim Madden, SUPRTCEN Alameda



#### QUARTERLY MONITORING WELL SAMPLING AND ANALYSIS SECOND QUARTER 1995

U.S. Coast Guard Support Center Exchange Center Location Coast Guard Island Alameda, California

PSI Project No. 582-34006

JUNE 9, 1995

Professional Service Industries, Inc.





### Professional Service Industries, Inc.

June 5, 1995

United States Coast Guard Support Center Civil Engineering Unit 2000 Embarcadero, Suite 200 Oakland, CA 94606-5000

Attention:

Mr. Louis Rivero

Subject:

<u>OUARTERLY MONITORING WELL SAMPLING & ANALYSIS</u>

SECOND QUARTER 1995

Project:

**Exchange Center Location** 

Coast Guard Island

Alameda, California 94606

Project # 582-34006

#### Dear Mr. Rivero:

Professional Service Industries, Inc. (PSI) is pleased to present the results of groundwater sampling for the second quarter of 1995. A description of the sampling and laboratory analysis for the six monitoring wells located at the Exchange Center Location (see Vicinity Map, Site Plan, and Monitoring Well Location Map) are contained herein.

This is the third of four quarterly sampling events, authorized by Ms. Evelyn E. Navarro, contracting officer with the U.S. Coast Guard, on August 31, 1994

Field activities were conducted on April 25, 1995. The purpose of this program is to collect information on groundwater elevations and to monitor hydrocarbon concentrations in the groundwater below the Site.

#### SAMPLING METHOD

Prior to purging and sampling the six monitoring wells, the ground water in each well was measured, and the elevation was then calculated. The monitoring wells were purged in order to establish a flow of groundwater into the wells and to remove any longstanding water. Well purging was accomplished by means of a bailer. Approximately 6 to 8 gallons of water (at least 3 casing volumes) were removed from each well prior to sampling. The purged groundwater from the wells was contained in six labeled 55-gallon drums and left on-site for future storage for additional sampling. After allowing the wells to recharge to a minimum of 80% of the original well volume, groundwater samples were collected.

Prior to sampling from the wells, the bailer was cleaned using trisodium phosphate solution and triple-rinsed with potable water. Water samples were drained from the bailer into certified clean, 40 ml vials, with care being taken to eliminate headspace. The vials were labeled and placed into cold storage and delivered to the PSI laboratory in Lawrence

Project No.: 582-34006 June 5, 1995

Kansas (California certified) for analysis. Proper chain-of-custody procedures were observed. Chain-of-custody is included with the attached analytical results.

#### **OBSERVATIONS**

The ground water in wells MW-1, MW-2, MW-3, MW-5, and MW-6 appeared clear with no determinable odors. The groundwater from well MW-4 appeared cloudy but had no determinable odor. Note: see Appendix, Groundwater Elevation Data.

#### LABORATORY ANALYSES

The groundwater samples were submitted to the PSI laboratory in Lawrence, Kansas (California certified) and analyzed for Aromatic Volatile Organics by Environmental Protection Agency (EPA) method 8020 and Total Petroleum Hydrocarbons Modified for gasoline (TPH-g) and EPA method 8015 using gas chromatography with photoionization detection. The analytical results are summarized below. The complete laboratory report, including analytical results, and chain-of-custody is attached.

### SUMMARY OF ANALYTICAL RESULTS SECOND QUARTER 1995 GROUNDWATER MONITORING

Well Number	Date of Sample	Benzene	Toluene	Ethylbenzene	Xylenes	трн-д
MW-1	4/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-1	7/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-1	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-1	10/20/94	N.D.	N.D.	N.D.	N.D.	N.D.
 MW-1	1/31/95	N.D.	N.D.	N.D.	N.D.	N.D.
 MW-1	4/25/95	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	4/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	7/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	10/20/94	N.D.	N.D.	N.D.	N.D.	N.D.
 -MW-2	1/31/95	N.D.	N.D.	N.D.	N.D.	N.D.
 -MW-2	4/25/95	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	4/8/93	30	N.D.	N.D.	N.D.	6,000
MW-3	7/8/93	N.D.	N.D.	N.D.	N.D.	Ń.D.
MW-3	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-3	10/20/94	N.D.	N.D.	N.D.	N.D.	N.D.
 MW-3	1/31/95	N.D.	N.D.	N.D.	N.D.	N.D. 🗸
 -MW-3	4/25/95	N.D.	N.D.	ND.	N.D.	$N.D. \checkmark$

Well <b>Number</b>	Date of Sample	Benzen	e Toluene	Ethylbenzene	Xylenes	трн-д
MW-4	4/8/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-4	7/8/93	8.8	N.D.	N.D.	N.D.	N.D.
MW-4	10/20/93	N.D.	N.D.	N.D.	N.D.	2,700
MW-4	10/20/94	N.D.	N.D.	N.D.	N.D.	N.D.
MW-4	1/31/95	N.D.	N.D.	N.D.	N.D.	N.D.
MW-4	4/25/95	N.D.	N.D.	N.D.	N.D.	N.D.
MW-5	4/8/93	14.0	0.63	N.D.	1.5	170
MW-5	7/8/93	3.7	0.46	N.D.	170	4,300
MW-5	10/20/93	N.D.	N.D.	N.D.	N.D.	N.D.
MW-5	10/20/94	N.D.	N.D.	N.D.	N.D.	N.D. N.D.
MW-5	1/31/95	N.D.	N.D.	N.D.	N.D.	N.D.
MW-5	4/25/95	N.D.	N.D.	N.D.	N.D.	N.D.
MW-6	4/8/93	7.4	1.2	20	20	720
MW-6	7/8/93	N.A.	N.D.	N.D.	N.D.	610
MW-6	10/20/93	N.D.	N.D.	N.D.	N.D.	660 200
MW-6	10/20/94	N.D.	N.D.	N.D.	N.D.	N.D.
MW-6	1/31/95	N.D.	N.D.	N.D.	N.D.	N.D. N.D.
MW-6	4/25/95	N.D.	N.D.	N.D.	6.8	14.17.

Notes: All concentrations are in micrograms per liter, (ug/l) (parts per billion).

N.D.= Analytes reported as not detected above the analytical reporting limit.

The well referred to as MW-1 In the report dated December 16, 1993, is referred to as MW-6 in this report.

#### DISCUSSION OF RESULTS

Based on the analytical results for this sampling event, it appears that no concentrations of TPH-g or BTEX were detected in groundwater samples collected from MW-1, MW-2, MW-3, MW-4 and MW-5. This is consistent with the results observed in Quarter 1, 1995. In groundwater sampled from MW-6, petroleum hydrocarbons were not detected with the exception of ethylbenzene at a concentration of 6.8 ppb. In Quarter 1, 1995 no concentrations of ethylbenzene were detected in this well.

Groundwater has decreased in elevation in all of the monitoring wells compared to the last quarterly monitoring event. Groundwater was determined to flow in a westerly direction. This direction is consistent with that observed during the previous quarter although the gradient is steeper. Due to its close proximity to the San Francisco Bay, groundwater may be influenced by tidal action

The next quarterly groundwater sampling event for the site is scheduled for the month of July 1995

Project No.: 582-34006 June 5, 1995

#### **LIMITATIONS OF INVESTIGATION**

Our investigation was performed using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consultants practicing at this or similar localities. The samples collected and used for testing and observations are believed representative of Site conditions. No other warranty, expressed or implied, is made to conclusions and professional advice included in this report.

This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the proper authorities and/or regulating agencies.

The findings of this report reflect the conditions of the Site during the time of the Site visit. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties.

In addition, changes in applicable or appropriate standards may occur from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should be updated as changes may occur.

The opportunity to be of service is appreciated. Should you have any questions regarding the content of this report, or we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Professional Service Industries, Inc.

David Siegel Staff Geologist

Glenn G. Hilton

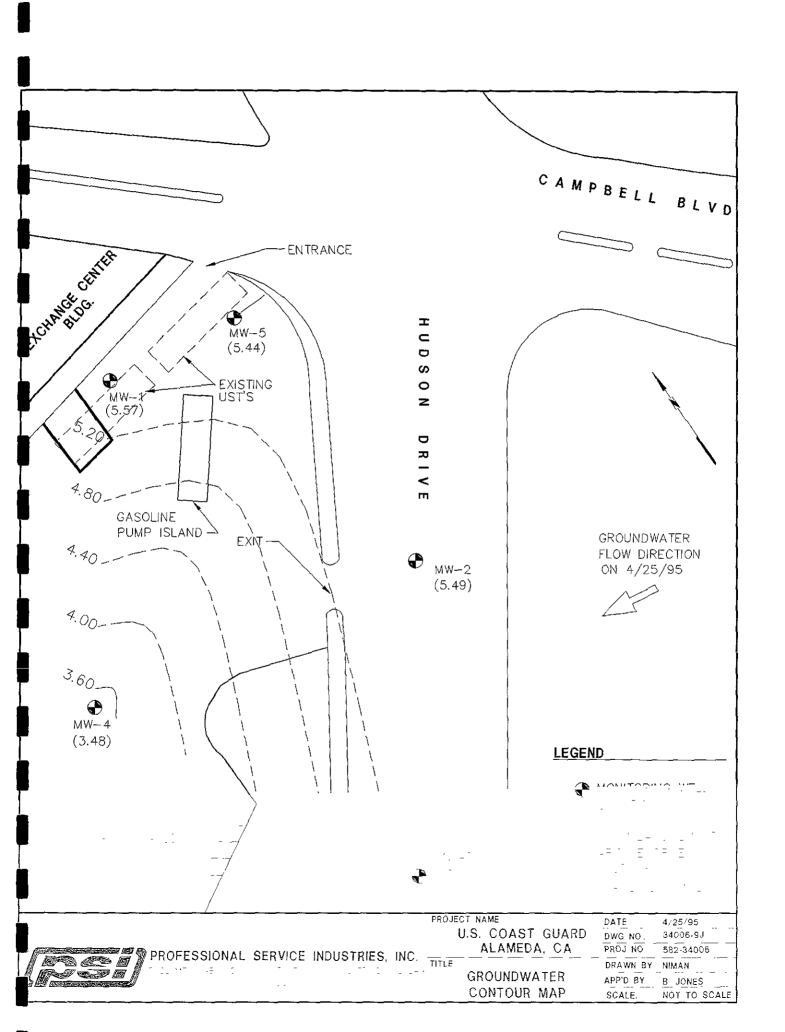
Geologist RG #5318

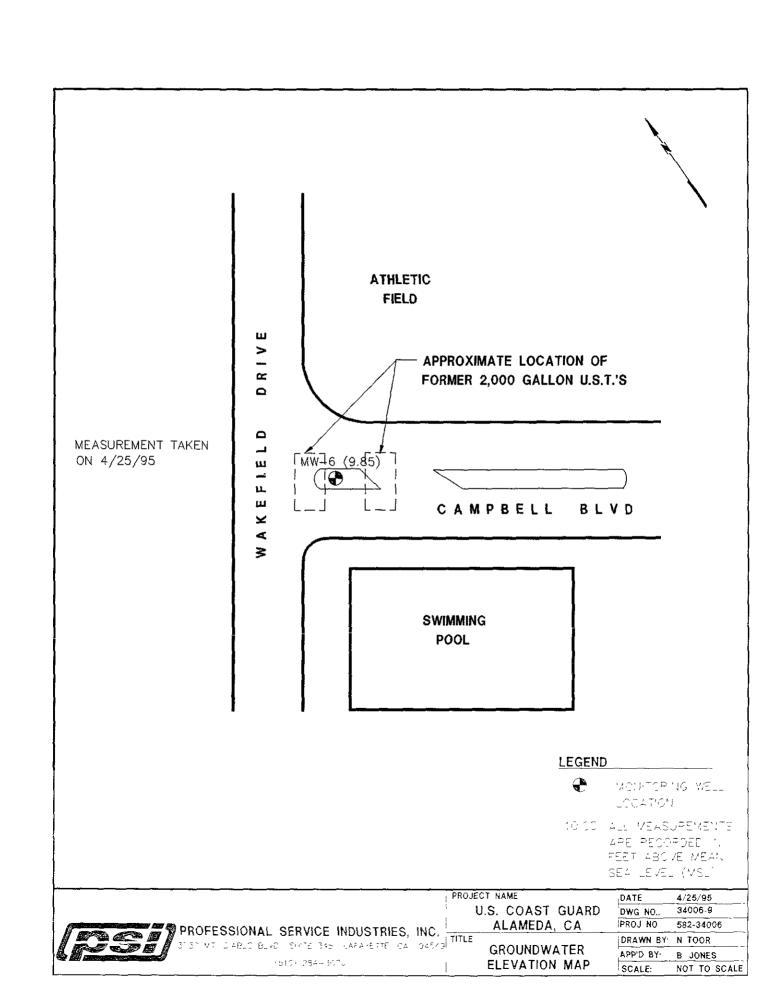
Glenn G. Hiltan

DS/ds









GROUNDWATER SAMPLING DATA

DAILY FIEL	D REC	ORE	)	DATE: 4/25/95			PAGE 1 of 2	
Project No: 582-340				Project Name: Co	oast Gua	AM		AM
Location: Alameda,	CA			Time on Job:	7:30	PM	to: 15:00	РМ
Weather Conditions:	Clear							i
Activity: Quarterly G	roundwater Sa	mpling						
PERSONNEL ON	SITE			<u></u>				
Na	ime			Company			Time In	Time Out
Beverly Jones			PSI				8:00	15:00
			<u> </u>					
ļ			<del> </del>		<del></del>			
				<u> </u>		<del></del>	<u></u>	
VISITORS ON SIT	Έ		*					
Na	ime			Company/Ager	су		Time In	Time Out
	<del></del>		<u> </u>			<u> </u>		 
DEDOONAL CASE			<u></u>				<u> </u>	
PERSONAL SAFE		- V	<u> </u>			T 10		
X Protective GI		X	Hard hat Safety Goggles/	/Glasses	X	Tyvek Covera 1/2 - Mask R		
Other Safety Equipm			Carety Cogglesi	Oldsbes		172 - Wask 10	espirator	
Monitoring Equipmen	nt: Hy Pac cor	nbinati	on pH/temperatu					
WASTE STORAG	E INVENTOR	—— ?Y	<del></del>			<u> </u>		
Container Type	Container		Descri	ption of Contents a	nd Qua	ntity	Loca	ation
6-55 gallon	purge			W-2, MW-3, MW-4	<u>`</u>			
drums			10/20/94, 1/31/9	95, 4/25/95			on site	
						<u> </u>		<del></del>
			f 			· ·		<u> </u>
	<u></u>							
Signature of Field Re	nresentativa		<u> </u>				Date 4/25/95	
Notes				1	30 MT, E LAF			NC

DAILY FIEL	D RECORD	DATE: 4/25/95	PAGE 2 of 2
	(continued)		
TIME	DESCRIPTION OF DAILY ACTIV	ITIES & EVENTS	
7:30	Amve at site, set up equipment		
8:30	Purge and sample MW-1		
9:20	Purge and sample MW-2		
40.05			
10:05	Purge and sample MW-3		
10.50	Duran and namely MAN 4	<del></del>	
10:50	Purge and sample MW-4		
11:35	Purge and sample MW-5		
11.55	r dige and sample wee-5		
12:30	Purge and sample MW-6		
COMMENTS & CH	ANGES FROM WORK PLAN		
		<del></del>	
TIME	TELEPHONE CONVERSATION F	RECORD	
Signature of Field Re	presentative:		Date 4/25/95
		PROFESSIONAL SERVICE I	
		3730 MT, DIABLO BLVD	
		LAFAYETTE, CA (510) 284-30	

	GROUNI	DWATER SAMPLIN	NG DATA		Vell No. MW-1 Project No. 582-34006
Time (24 Hr. Clock)	Volume Removed (gal)	Electrical Conductivity (umhos/cm)x100	Temperature (F)	pH	Turbidity
8:00	begin purging				
8:05	1.00	1.05	67.01		Clear
8:10	2.00	1.03	66.31		Clear
8:15	3.00	1.04	65.81		Clear
8:20	4.00	1.02	64.07		Clear
8:25	5.00	1.02	63.71	<u> </u>	Clear
8:30	6.00	1.03	62.29		Clear
8:35	Collect Sample	1.04	61.01		Clear
Total Depth	Depth to	Water		Well Inside Diameter	(in.) 2.00
to Bottom	- Water =	Column (ft.)			
18.2	8.15	10.05		}	
				Volume 2"=0.163	5"=1.02  10"=4.08
Volume Factor	x Water Column =	Well Casing Vol. (gal)		Factor 3"=0.367	6"=1.47 12"=4.08
0.163	10.05	1.64	4.92	V.F.=gal/ft.	4"=0.653 8"=2.61
<b>T</b>	<u> </u>	L	4.05.05		
Date (s) Purged	<del></del>			Well Dewatered	Yes No X
Purge Method	1718	<del>_</del>		Date Sampled	4/25/95
Total Volume Rem				Time Sampled	8:35
Casing Volumes R		<del></del>		Sample Method	Bailer
Purge Rate (GPM)		L	0.17	Weather Conditio	clear
				Purged / Sampled by	
Depth to Water Af	ter Recovery (ft.) =			99% Recovered Prio	
Yotes				ional Service Industrie RGING AND SAMP Monitoring Well	es, Inc LING FIELD DATA MW-1

		DWATER SAMPLIN	IG DATA		Vell No. MW-2 Project No. 582-34006
Time (24 Hr. Clock)	Volume Removed (gal)	Electrical Conductivity (umhos/cm)x100	Temperature (F)	pН	Turbidity
8:45	begin purging	<u> </u>			
8:50	1.00	1.06	68.10	<u> </u>	Clear
8:55	2.00	1.07	70.20	<u> </u>	Clear
9:00	3,00	1.1	68.50		Clear
9:05	4.00	1.15	67.40		Clear
9:10	5,00	1.2	68.10		Clear_
9:15	6.00	1.16	69.10		Clear
9:20	Collect Sample	1.18	70.15		Clear
Total Depth	Depth to	Water		Well Inside Diameter	r (m.) 2.00
to Bottom	- Water =	Column (ft.)			
19.4	8.25	11.15			Z# 400 40# 400
<del></del>					5"=1.02 10"=4.08
Volume Factor	x Water Column =	Well Casing Vol. (gal)			6"=1.47 12"=4.08
0.163	11.15	1.82	5.46	V.F.=gal/ft.	4"=0.653 8"=2.61
	L		L		
Date (s) Purged	<del></del>	<del></del>		Well Dewatered	Yes No X
urge Method		<del></del>		Date Sampled	4/25/9
otal Volume Rem				Time Sampled	9:2
Casing Volumes R				Sample Method	Bail
Purge Rate (GPM)	<u> </u>		0.17	Weather Conditio	<u>cle</u>
	<del></del>			Purged / Sampled by	
	ter Recovery (ft.) =			99% Recovered Price	
Votes				ional Service Industrie RGING AND SAMP Monitoring Well	es, Inc LING FIELD DATA MW-2

	GROUNI	DWATER SAMPLIN	IG DATA		Well No. MW-3 Project No. 582-34006
Time (24 Hr. Clock)	Volume Removed (gal)	Electrical Conductivity (umhos/cm)x100	Temperature (F)	pH	Turbidity
9:30	begin purging			<b></b>	
9:35	1.00	1.05	65.22		Clear
9:40	2.00	1.07	66.10	<del></del>	Clear
9:45	3.00	1.08	64.52	<del> </del>	Clear
9:50	4.00	1.07	67.08	<b> </b>	Clear
9:55	5.00	1.08	68.11	<b> </b>	Clear
10:00	6.00	1.09	67.01	<u> </u>	Clear
10:05	Collect Sample	1.09	66.11		Clear
Total Depth	Depth to	Water		Well Inside Diamete	r (in.) 2.00
to Bottom	- Water =	Column (ft.)	<u> </u>	Well inside Diamete	f (in.) 2.00
19.5	8.16	11.34		1	
+ > • • •	V.10	11.57	<del></del>	!  Volume	5"=1.02 10"=4.08
Volume Factor	x Water Column =	Well Casing Vol. (gal)		4	7 6"=1.47 12"=4.08
0.163	11.34	1.85	5.55	V.F.=gal/ft.	4"=0.653 8"=2.61
Date (s) Purged	<u></u>	<u></u>	4/25/95	Well Dewatered	Yes No X
Purge Method	<del></del>	<del></del>		Date Sampled	4/25/95
Total Volume Rem	noved (gal)			Time Sampled	10:05
Casing Volumes R				Sample Method	Baile
Purge Rate (GPM)				Weather Conditio	clear
<u> </u>		<u> </u>		Purged / Sampled by	
Depth to Water Af	ter Recovery (ft.) =			99% Recovered Price	
Notes				ional Service Industri	

	GROUN	DWATER SAMPLIN	IG DATA		Vell No. MW-4 Project No. 582-34006
Time (24 Hr. Clock)	Volume Removed (gal)	Electrical Conductivity (umhos/cm)x100	Temperature (F)	рН	Turbidity
10:15	begin purging	<b></b>	<u> </u>	<del>                                     </del>	<del></del>
10:20	1.00	1.19	71.20	<b></b>	Clear
10:25	2.00	1.22	70.10	<b>}</b>	Clear
10:30	3.00	1.18	73.40	<u> </u>	Clear
10:35	4.00	1.17	74.50		Clear
10:40	5.00	1.18	75.40		Clear
10:45	6.00	1.16	73.30	<u> </u>	Clear
10:50	Collect Sample	1.17	74.50		Clear
Total Depth	Depth to	Water		Well Inside Diameter	r (in.) 2.00
to Bottom	- Water =	Column (ft.)			
19.49	7.90	11.59			
				4	5"=1.02 10"=4.08
Volume Factor	x Water Column =	Well Casing Vol. (gal)		4	6"=1.47 12"=4.08
0.163	11.59	1.89	5.67	V.F.=gal/ft.	4"=0.653 8"=2.61
D (1 (2 D 4		L	405:05	777 11 20	¥7
Date (s) Purged				Well Dewatered	Yes No X
Purge Method	1/ \$			Date Sampled	4/25/95
Total Volume Rem	<del></del>			Time Sampled	10:50
Casing Volumes R		<u></u>		Sample Method	Baile
Purge Rate (GPM)	·	<u> </u>	0.17	Weather Conditio	clea
Dough to Mile	A P (6.)	<del></del>		Purged / Sampled by	
Depth to Water Af	ter Recovery (ft.) =			99% Recovered Price	
Votes				ional Service Industric RGING AND SAMP Monitoring Well	es, Inc LING FIELD DATA MW-4

		DWATER SAMPLIN	IG DATA		Well No. MW-5 Project No. 582-34006
Time (24 Hr. Clock)	Volume Removed (gal)	Electrical Conductivity (umhos/cm)x100	Temperature (F)	pН	Turbidity
11:00	begin purging				
11:05	1.00	1.24	72.11		Clear
11:10	2.00	1.25	71.30	<u> </u>	Clear
11:15	3.00	1.21	72.10	<b></b>	Clear
11:20	4.00	1.27	71.15	<u> </u>	Clear
11:25	5.00	1.28	72.10		Clear
11:30	6.00	1.29	71.15		Clear
11:35	Collect Sample	1.30	72.10		Clear
Total Depth	Depth to	Water		Well Inside Diame	ter (in.) 2.00
to Bottom	- Water =	Column (ft.)			
11.82	8.54	3.78			63 5"=1.02 10"=4.08
Volume Factor	x Water Column =	Well Casing Vol. (gal)			67 6"=1.47 12"=4.08
0.367	3.28	1.38	2.76	V.F.=gal/ft.	4"=0.653 8"=2.61
)-(-(-(-) D1		L	4 105 105	177 11 D / 1	V. V. V
Date (s) Purged				Well Dewatered	Yes No X
urge Method	17.			Date Sampled	4/25/9
otal Volume Ren			6.00	Time Sampled	11:3
asing Volumes R		<del>,</del>		Sample Method	Baile Baile
urge Rate (GPM)	<u> </u>	L	0,17	Weather Conditio	clea
	<del></del>			Purged / Sampled	
<del></del>	ter Recovery (ft.) =			99% Recovered P	
otes				ional Service Indust RGING AND SAM Monitoring Well	ries, Inc IPLING FIELD DATA MW-5

	GROUNI	DWATER SAMPLIN	G DATA		Vell No. MW-6 roject No. 582-34006
Time (24 Hr. Clock)	Volume Removed (gal)	Electrical Conductivity (umhos/cm)x100	Temperature (F)	рН	Turbidity
11:45	begin purging				
11:50	1.00	1.06	69.10		Clear
11:55	2.00	1.07_	68.25		Clear
12:00	3.00	1.10	67.12	<u> </u>	Clear
12:05	4.00	1.09	68.15		Clear
12:10	5.00	1.10	69.07		Clear
12:15	6.00	1.08	70.10		Clear
12:20	7.00	1.10	69.18	<u>                                     </u>	Clear
12:25	8.00	1.09	70.01		
12:30	Collect Sample	1.09	70.20		
Total Depth	Depth to	Water		Well Inside Diameter	(in.) 2.00
to Bottom	- Water =	Column (ft.)			· · · · · · · · · · · · · · · · · · ·
19.31	4.45	14.86			
				Volume 2"=0.163	5"=1.02  10"=4.08
Volume Factor	x Water Column =	Well Casing Vol. (gal)		Factor 3"=0.367	$6^{\circ} = 1.47  12^{\circ} = 4.08$
0.163	14.86	2.42	7.26	V.F.=gal/ft.	4"=0.653 8"=2.61
Date (s) Purged			4/25/95		Yes No X
Purge Method				Date Sampled	4/25/ <u>9</u> 5
Total Volume Rem			8.00	Time Sampled	12:30
Casing Volumes R				Sample Method	Baile
Purge Rate (GPM)			0.18	Weather Conditio	clea
				Purged / Sampled by	
Depth to Water Af	ter Recovery (ft.) =			99% Recovered Prio	
Notes				ional Service Industrie RGING AND SAMP Monitoring Well	

LABORATORY RESULTS AND CHAIN OF CUSTODY RECORD



### Professional Service Industries, Inc.

Lawrence Analytical Division
ANALYTICAL REPORT

TESTED FOR: Professional Service Industries, Inc.

3730 Mt. Diablo Blvd. # 345 Lafayette, CA 94549 PROJECT: Coast Guard Alameda PROJECT NUMBER: 582

PAGE: 1

ATTENTION: Beverly Jones

DATE:

May 9, 1995

**OUR REPORT NUMBER: 582-39673** 

Attached, please find our analytical report for samples described on the Chain-of-Custody Record. Please reference our report number and direct any questions regarding this report to the individual designated below or to one of our Customer Service Representatives.

Respectfully Submitted, Professional Service Industries, Inc.

> Lawrence Chemistry Department Manager

Date

4820 W 15th Street • Lawrence, KS 66049 • Phone 913 749-2381 • Fax. 913 865-9587

# PROFESSIONAL SERVICE INDUSTRIES, INC. 4820 West 15th St., Lawrence, KS 66049

PROJECT: Coast Guard Alameda **PROJECT NUMBER: 582** PAGE: 2

Batch #: 39673 Matrix: Water

Client Sample #: 2 CG-Alameda -1 Our Sample #: 864820  BTEX  Benzene	Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
DIFEX   Benzene	Client Sample #: 2 CC Alama	oda 1					
BTEX Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Xylenes <1.0 ug/L 602 5-03-95 MV 1.0  Xylenes <1.0 ug/L 602 5-03-95 MV 1.0  Surrogate Recovery = 85%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20  Client Sample #: 2 CG-Alameda -2 Our Sample #: 884821  BTEX Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0  Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20  Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX Benzene <1.0 ug/L 602 5-03-95 MV 1.0  TOluene <1.0 ug/L 602 5-03-95 MV 1.0  Surrogate Recovery = 98%  Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX Benzene <1.0 ug/L 602 5-03-95 MV 1.0  Surrogate Recovery = 88%  TPH - PURGEABLE Gasoline Range <0.20 ug/L 602 5-03-95 MV 1.0  Xylenes <1.0 ug/L 602 5-03-95 MV 1.0  Surrogate Recovery = 88%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0  Surrogate Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0		:ua - 1					
Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Sylenes Sylene	Cui Cuinpio ii.						
Toluene	BTEX						
Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Xylenes <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 85%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20 Surrogate Recovery = 95%  Client Sample #: 2 CG-Alameda -2 Our Sample #: 864621  BTEX  Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0 Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20 Surrogate Recovery = 98%  Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX  Benzene <1.0 ug/L 602 5-03-95 MV 0.20 Surrogate Recovery = 98%  Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX  Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 98%  TPH - PURGEABLE Gasoline Range <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 88%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0 Surrogate Recovery = 88%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0 Surrogate Recovery = 88%	Benzene		ug/L		5-03-95		
Xylenes	Toluene	-	ug/L	_	5-03-95		
### Surrogate Recovery = 85%  TPH - PURGEABLE  Gasoline Range	Ethylbenzene	<1.0	<del>-</del>				
TPH - PURGEABLE Gasoline Range		<1.0	ug/L	602	5-03-95	MV	1.0
Gasoline Range	Surrogate Recovery = 85%						
Gasoline Range	TPH - PURGEABLE						
Surrogate Recovery = 95%   Surrogate Recovery = 95%		<0.20	mg/kg	5030/8015	5-03-95	MV	0.20
BTEX         Benzene       <1.0		· <b>-</b>					
BTEX         Benzene       <1.0	Client Sample #: 2 CG-Alame	-da <b>-</b> 2					
Benzene		,uu -2					
Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Xylenes <1.0 ug/L 602 5-03-95 MV 1.0 Xylenes <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20 Surrogate Recovery = 98%  Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 88%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 1.0	BTEX						
Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Xylenes <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20  Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX Benzene <1.0 ug/L 602 5-03-95 MV 1.0 Toluene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0 Xylenes <1.0 ug/L 602 5-03-95 MV 1.0 Surrogate Recovery = 88%  TPH - PURGEABLE Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20			•				
Xylenes       <1.0       ug/L       602       5-03-95       MV       1.0         TPH - PURGEABLE         Gasoline Range       <0.20			-				
Surrogate Recovery = 79%  TPH - PURGEABLE Gasoline Range			•				
TPH - PURGEABLE Gasoline Range	<u>-</u>	<1.0	ug/L	602	5-03-95	MV	1.0
Gasoline Range	Surrogate Recovery = 79%						
Surrogate Recovery = 98%         Client Sample #: 2 CG-Alameda -3         Our Sample #: 864622         BTEX         Benzene       <1.0       ug/L       602       5-03-95       MV       1.0         Toluene       <1.0	TPH - PURGEABLE						
Client Sample #: 2 CG-Alameda -3 Our Sample #: 864622  BTEX Benzene	Gasoline Range	<0.20	mg/kg	5030/8015	5-03-95	MV	0.20
Our Sample #: 864622         BTEX         Benzene       <1.0       ug/L       602       5-03-95       MV       1.0         Toluene       <1.0	Surrogate Recovery = 98%		•				
Our Sample #: 864622         BTEX         Benzene       <1.0       ug/L       602       5-03-95       MV       1.0         Toluene       <1.0	Client Sample #: 2 CG-Alame	ada -3					
Benzene         <1.0         ug/L         602         5-03-95         MV         1.0           Toluene         <1.0	•	, du •					
Toluene <1 0 ug/L 602 5-03-95 MV 1.0  Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0  Xylenes <1.0 ug/L 602 5-03-95 MV 1.0  Surrogate Recovery = 88%  TPH - PURGEABLE  Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20	BTEX						
Ethylbenzene <1.0 ug/L 602 5-03-95 MV 1.0  Xylenes <1.0 ug/L 602 5-03-95 MV 1.0  Surrogate Recovery = 88%  TPH - PURGEABLE  Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0 20	Benzene		ug/L				
Xylenes       <1.0			-				
Surrogate Recovery = 88%         TPH - PURGEABLE         Gasoline Range       <0.20			-				
TPH - PURGEABLE           Gasoline Range         <0.20		<1.0	ug/L	602	5-03-95	MV	1.0
Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20	Surrogate Recovery = 88%						
Gasoline Range <0.20 mg/kg 5030/8015 5-03-95 MV 0.20	TPH - PURGEABLE						
• • •		<0.20	mg/kg	5030/8015	5-03-95	MV	0 20
	Surrogate Recovery = 97%		<b>.</b>				

# PROFESSIONAL SERVICE INDUSTRIES, INC. 4820 West 15th St., Lawrence, KS 66049

PROJECT: Coast Guard Alameda **PROJECT NUMBER: 582** PAGE: 3

Batch #: 39673 Matrix: Water

Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
Client Sample #: 2 CG-Ala	meda -A					
Our Sample #: 2 66-74a	illicua -4					
our campion. conce						
BTEX						
Benzene	<1.0	ug/L	602	5-03-95	MV	1.0
Toluene	<1.0	ug/L	602	5-03-95	MV	1.0
Ethylbenzene	<1.0	ug/L	602	5-03-95	MV	1.0
Xylenes	<1.0	ug/L	602	5-03-95	MV	1.0
Surrogate Recovery = 82°	%	-				
TPH - PURGEABLE						
Gasoline Range	<0.20	mg/kg	5030/8015	5-03-95	MV	0.20
Surrogate Recovery = 94°		9,9		<del>-</del>	••••	·•
Client Sample #: 2 CG-Ala Our Sample #: 864624	meda -5					
BTEX						
Benzene	<1.0	ug/L	602	5-03-95	MV	1.0
Toluene	<1.0	ug/L	602	5-03-95	MV	1.0
Ethylbenzene	<1.0	ug/L	602	5-03-95	MV	1.0
Xylenes	<1.0	ug/L	602	5-03-95	MV	1.0
Surrogate Recovery = 799		~ <del>5</del> , <b>~</b>	332			,,,,
TPH - PURGEABLE						
Gasoline Range	<0.20	mg/kg	5030/8015	5-03-95	MV	0.20
Surrogate Recovery = 88°		99	0000.001.0	0 00 00		0,20
Client Sample #: 2 CG-Ala Our Sample #: 864625	ımeda -6					
BTEX						
Benzene	<1.0	ug/L	602	5-03-95	MV	1.0
Toluene	<1.0	ug/L	602	5-03-95	MV	1.0
Ethylbenzene	6.8	ug/L	602	5-03-95	MV	1.0
Xylenes	<1.0	ug/L	602	5-03-95	MV	1.0
Surrogate Recovery = 67°		₩9, <b>L</b>		5 55 55	141 4	, . <del>-</del>
Sarrogate Mecovery - 07	, v					
TPH - PURGEABLE						_
Gasoline Range	< 0 20	mg/kg	5030/8015	5-03-95	MV	0.20
Surrogate Recovery = 729						

## **QUALITY CONTROL DATA**

## PROFESSIONAL SERVICE INDUSTRIES, INC. 4820 West 15th St., Lawrence, KS 66049

Batch #: 39673 Matrix: Water PROJECT: Coast Guard Alameda **PROJECT NUMBER: 582** 

Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
Method Blank						
848461						
BTEX						
Benzene	<1.0	ug/L	602	5-03-95	JM	1.0
Toluene	<1.0	ug/L	602	5-03-95	JM	1.0
Ethylbenzene	<1.0	ug/L	602	5-03-95	JM	1.0
Xylenes Surrogate Recovery = 107%	<1.0	ug/L	602	5-03-95	JM	1.0

 CLIENT#		PERCENT
(LAB#)	ANALYTE	RECOVERY
LCS	Benzene	100
848462	Toluene	88
	Ethylbenzene	86
	Xylenes	86
	Surrogate Recovery = 91%	
Matrix	Benzene	94
Spike	Toluene	83
864653	Ethylbenzene	81
	Xylenes	82
	Surrogate Recovery = 88%	
Matrix	Benzene	93
Spike	Toluene	82
Duplicate	Ethylbenzene	80
864653	Xylenes	81
	Surrogate Recovery = 88%	

#### PROFESSIONAL SERVICE INDUSTRIES, INC.

4820 West 15th St., Lawrence, KS 66049

Batch #: 39673 Matrix: Water

864853

Matrix Spike

Duplicate

864853

Analyte Results Units Method Analysis Date Analyst MDL Method Blank 848461 **TPH - PURGEABLE** Gasoline Range < 0.10 mg/L 5030/8015 5-03-95 MV 0.10 Surrogate Recovery = 107% PERCENT CLIENT# (LAB#) ANALYTE RECOVERY LCS TPH - PURGEABLE 848462 Gasoline Range 103 Surrogate Recovery = 107% **TPH-PURGEABLE** Matrix Spike Gasoline Range 95

95

Surrogate Recovery = 96%

Surrogate Recovery = 105%

**TPH - PURGEABLE** 

Gasoline Range

PROJECT: Coast Guard Alameda

PROJECT NUMBER: 582

	CHAI	N OF CUSTODY RECORD	Professional Service Industries, Inc.		
PROJECT NAME REPORT TO		INVOICE TO	1 (PSI) Professional Service inclustries, inc.		
Coast Game Clause		SAME	LABORATORY SUBMITTED TO:		
PROJECT NUMBER	PROJECT MANAGER  BUERY  ADDRESS  ADDRESS  SUITEM	ADDRESS	G913 Hwy. 225 Deer Park, TX 77536 Deer Park, TX 77536 Deer Park, TX 77536		
P O NUMBER	3730 MH Dishlo Avi	CITY / STATE / ZIP	(713) 479-8307 (800) 548-7901  6056 Ulmerton Road 850 Poplar Street		
REQUIRED DUE DATE	CITY/STATE/ZIP	ATTENTION	Clearwater, FL 34620 Pittsburgh, PA 15220 (813) 531-1446 (412) 922-4000		
SAMPLES TO LAB VIA	TELEPHONE	TELEPHONE			
HORMA	FAX				
NUMBER OF COOLERS	REPORT VIA VERBAL FA		LABORATORY USE ONLY		
FedX 4235173412	U.S. MAIL/OVERNIGH		ANALYTICAL DUE DATE 5-5-95		
TRANSFER RELINQUISHED BY NUMBER DATE TIME	ACCEPTED BY SEAL DATE / TIME NUMBER	LABORATORY USE ONLY FIELD SERVICES	REPORT DUE DATE 5 - 9 - 95 INORGANIC 5 ORGANIC		
		Y/N S	PSI PROJECT NAME PSI - Zalausto		
	Chris Kosl-4/26/95 10:05	□ 日本の 「 「 「 「 「	PSI PROJECT # つらつ		
		V ) 40	PSIBATCH# 39673		
LABORATO	RY USE ONLY	40 D	PARAMETER LIST		
SAMPLE CUSTODIAN Chris Kodo	DATE/TIME 4-26-95 10.36	CONTANERS			
CNISNOO	COMP-C WATER W	NUMBER OF			
SAMPLE IDENTIFICATION DATE	E/TIME GRAD WASTE-X LAB NUMBER		<del>//////////</del>		
2 CO MICHER 1 8893	18:37 G W 84620				
2 (2 - 10 love do 2 of	19:40 6 (0)				
200 Maria 3 JB	10:08 B W 695				
2 (0 1) (0 M C 7 36)	11125 6 10				
J-(6-14/0mfd-5 350)	17:35 G W 24				
206 - Alemen (1 ogs)	12:30 6 W V				
	ない、水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水水				
	「大きなのである」 「大きなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのである。 「たなのでなのである。 「たなのでなのである。 「たなのである。 「たなのである。 「たなのでなのでなのである。 「たなのでなのでなのでなのでなのでなのでなのでなのでなのでなのでなのでなのでなのでな				
ADDITIONAL REMARKS DATE		595 SAMPLER'S SIGNATURE			
PSI A 600 10 (1)					

GROUNDWATER ELEVATION DATA

### **GROUNDWATER ELEVATION DATA**

Well <u>Number</u>	Measuring Point <u>Elevations</u>	Date of <u>Measurement</u>	Depth to Water (feet)	Water Level Elevations
MW-1	13.72	4/5/93	7.95	5.77
MW-1		7/8/93	8.20	5.52
MW-1		10/20/93	8.60	5.12
MW-1		10/20/94	8.02	5.70
MW-1		1/31/95	6.62	7.10
MW-1		4/25/95	8.15	5.57
MW-2	13.74	4/5/93	8.00	5.74
MW-2		7/8/93	8.20	5.54
MW-2		10/20/93	8.65	5.09
MW-2		10/20/94	7.86	5.88
MW-2		1/31/95	6.49	7.25
MW-2		4/25/95	8.25	5.49
MW-3 MW-3 MW-3 MW-3 MW-3	13.50	4/8/93 7/8/93 10/20/93 10/20/94 1/31/95 4/25/95	8.00 8.10 8.50 7.74 6.58 8.16	5.74 5.40 5.00 5.76 6.92 5.34
MW-4	13.38	4/8/93	8.20	5.43
MW-4		7/8/93	8.00	5.38
MW-4		10/20/93	8.35	5.03
MW-4		10/20/94	7.69	5.69
MW-4		1/31/95	6.46	6.92
MW-4		4/25/95	9.90	3.48
MW-5	13.98	4/8/93	8.00	5.98
MW-5		7/8/93	8.55	5.43
MW-5		10/20/93	8.85	5.13
MW-5		10/20/94	8.25	5.73
MW-5		1/31/95	6.86	7.12
MW-5		4/25/95	8.54	5.44
MW-6 MW-6 MW-6 MW-6 MW-6 MW-6	14.30	<b>4/8/93 7/8/93</b> 10/20/93 10/20/94 1/31/95 4/25/95	<b>4.50 4.90</b> 5.95 3.41 2.46 4.45	9.85 9.40 8.35 10.89 11.84 9.85

<sup>1</sup> Elevations in feet above Mean Sea Level.