

# LETTER OF TRANSMITTAL

To: <i>Eva Chu</i>	Date: <i>April 9, 2001</i>
<i>Environmental Health</i>	
	Subject: <i>Quarterly Well Monitoring Report</i>
<i>QIC 30440</i>	<i>AlcoPark, 165 13<sup>th</sup> St., Oakland</i>

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\_\_\_\_\_  
 Rod Freitag, Environmental Program Manager  
 County of Alameda - General Services Agency  
 Technical Services Department  
 1401 Lakeside Drive, 11th Floor  
 Oakland, CA 94612  
 Tel. (510) 208-9522

**APR 12 2001**

**If Enclosures Are Not As Noted, Notify Me At Once**

**GROUNDWATER MONITORING REPORT  
FIRST QUARTER, 2001  
ALCOPARK FUELING FACILITY  
OAKLAND, CALIFORNIA**

*MAR 2001*

Prepared for

**ALAMEDA COUNTY GENERAL SERVICES AGENCY**  
1401 Lakeside Drive, 11<sup>th</sup> Floor  
Oakland, California

Prepared by

**Professional Service Industries, Inc.**  
1320 West Winton Avenue  
Hayward, California 94545  
(510) 785-1111

March 15 2001  
575-9G028

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TABLE 1           GROUNDWATER ELEVATION AND ANALYTICAL DATA  
                    SUMMARY, SITE NO.2

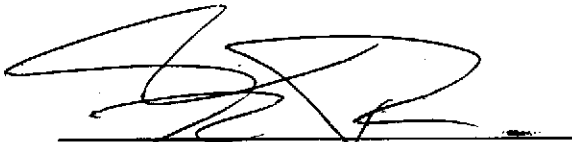
FIGURE 1         SITE LOCATION  
FIGURE 2         GROUNDWATER ELEVATION – 02/11/01

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## STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

Information provided in this report, prepared by Professional Service Industries, Inc. (PSI), is intended exclusively for the use of Alameda County General Services Agency (AGSA), for the evaluation of subsurface conditions as it pertains to the subject site. The professional services provided have been performed in accordance with practices generally accepted by other geologists, hydrologists, hydrogeologists, engineers, and environmental scientists practicing in this field. No other warranty, either expressed or implied, is made. As with all subsurface investigations, there is no guarantee that the work conducted will identify any or all sources or locations of contamination.

This report is issued with the understanding that AGSA is responsible for ensuring that the information contained herein is brought to the attention of the appropriate regulatory agency.



Frank R. Poss, REA  
Senior Hydrogeologist



Chris Merritt  
Project Geologist

# 1. INTRODUCTION

Professional Service Industries, Inc. (PSI) was retained by the Alameda County General Services Agency (ACGSA) to perform groundwater monitoring at the ACGSA Alcopark Fueling Facility-Site No. 2 located at 165 13<sup>th</sup> Street, Oakland, California. The site location is presented on Figure 1.

The groundwater monitoring was prompted by a request by the Alameda County Health Care Services Agency (HCSA), which requested additional information on the extent of petroleum hydrocarbon impacted groundwater (HCSA, 1997a).

## 1.1 SCOPE OF WORK

The scope of work consisted of the following tasks:

- Measure the depth to water in the site wells and prepare a groundwater elevation map.
- Determine the groundwater flow direction and gradient.
- Collect and chemically analyze groundwater samples from well MW-7.
- Prepare a report documenting the field procedures, analytical results, and conclusions regarding the site condition.

## 1.2 SITE BACKGROUND

GSA operates two 10,000-gallon USTs to fuel County vehicles. Three groundwater monitoring wells were installed at the Alcopark fueling station in March, 1989 to assess environmental conditions subsequent to the repair of a line leak at Dispenser No. 1. Initial sample results indicated the presence of BTEX in the groundwater. Subsequent sample results indicated the presence of TPH-G. Based on the analytical data, it was surmised that contaminants detected on-site were emanating from a source area located upgradient of the site. Sampling activities were halted in 1992 pending investigation of an upgradient source (GSA, 1997).

By letter dated May 30, 1997, the Alameda County Health Care Services Agency (HCSA) instructed GSA to resume groundwater monitoring at Alcopark (HCSA, 1997b). Sampling resumed in July 1997. Analytical data from that sampling event indicated elevated TPH-G and BTEX concentrations in the downgradient well. MTBE was also detected. Additional samples collected in October 1997 provided similar results (GSA, 1997). By a

letter dated September 11, 1997, the HCSA directed GSA to investigate the extent and stability of the plume.

To better define groundwater conditions downgradient of the UST, two borings were drilled on March 23, 1998. A grab groundwater sample was collected from one of the borings, and Well MW-6 was installed in the other boring. One more small diameter groundwater monitoring well (MW-7) was installed by PSI in September 1999 and the analytical results are presented in the PSI's report dated October 14, 1999.

### **1.2.1 Storage Tank System Upgrades**

In September of 1992, overflow protection, spill containment, and automatic tank gauging were installed on the two underground tanks. In July and August of 1996, additional upgrade work was done to comply with Title 23 of the California Code of Regulations. This included replacement of underground single-walled steel piping with double-wall fiberglass piping, and installation of dispenser sumps, piping sumps, and sump leak sensors (GSA, 1997).

## **2. GROUNDWATER MONITORING ACTIVITIES**

A PSI representative performed groundwater monitoring activities on February 8, 2001. The activities were performed in accordance with PSI standard procedures presented in Appendix A, and procedures described in a HCSA letter describing collection of samples without purging the wells (HCSA, 1997a).

### ***2.1 Groundwater Elevation and Flow Direction***

Prior to groundwater sampling, depth to groundwater was measured from the top of the well casings in each monitoring well. The groundwater measurements were converted to groundwater elevation and the data plotted on a groundwater elevation map. A groundwater elevation map was prepared for February 8, 2001. The map is presented as Figure 2. The groundwater elevation data are presented in Table 1.

Interpretation of the groundwater elevation map indicates the groundwater is flowing to the east-southeast under a hydraulic gradient of 0.006. Groundwater elevation is lower than the previous quarter.

### ***2.2 Groundwater Sampling***

The monitoring well MW-7 was sampled without purging as requested in the HCSA letter dated September 11, 1997. The groundwater sample was collected with disposable polyethylene tubing equipped with a check valve. The groundwater sample was collected according to PSI's standard protocol, included in Appendix A and were stored in an iced cooler at 4 degrees Celsius and maintained under Chain-of-Custody protocol.

To minimize the possibility of cross-contamination between sampling locations, most of the sampling equipment used is disposable. To further minimize the possibility of cross-contamination, the water sounder and all other reusable sampling equipment were cleaned with a non-phosphate detergent and rinsed twice with deionized water prior to use in the next well.

### 3. LABORATORY ANALYSIS PROGRAM

The groundwater samples collected during this investigation were submitted to McCampbell Analytical, Inc. of Pacheco, California. McCampbell Analytical is a State of California Department of Health Services certified hazardous waste laboratory (Environmental Laboratory Accreditation Program [ELAP] #1644). A summary of the analytical methods is presented below.

The groundwater samples collected at the site this quarter were analyzed for the following constituents by the indicated methods:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G) in accordance with Environmental Protection Agency (EPA) Method 8015-Modified.
- Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE) by EPA Method 8020.

The samples were transported to the laboratory under Chain-of-Custody protocol. Copies of the chain of custody forms are included in Appendix B.

#### 3.1 ANALYTICAL RESULTS

The groundwater samples were collected and chemically analyzed in accordance with the analytical method requirements. The analytical data is summarized in Table 1. Laboratory reports are presented in Appendix B.

TPH-G, MTBE and the BTEX compound Toluene were detected in the groundwater sample from MW-7.

- TPH-G was detected in well MW-7 (130 µg/l).
- MTBE was detected in well MW-7 (650 ug/l) by the analytical method EPA 8020.
- Toluene was detected in MW-7 (0.53 ug/l) which was just above the reporting limit of 0.50 ug/l.



#### 4. CONCLUSIONS

Based on the information presented in this report, the following conclusions have been reached:

- Groundwater exists at an elevation of approximately 14.53 to 14.73 feet above msl.
- Groundwater flow direction is to the east-southeast with a gradient of 0.006.
- The groundwater sample collected from well MW-7 contained measurable concentrations of TPH-G and MTBE and the BTEX compound Toluene.

Based on the results presented in this report, PSI recommends additional groundwater monitoring be performed to determine contaminant trends. Evaluation of the trends will assist in differentiating between a one time leak event (such as might have happened during piping upgrade work) and an on-going source.

## REFERENCES

- GSA, 1997, Request For Proposal (RFP) for Groundwater Services, December 2.
- HCSA, 1997a, Workplan Request Letter to Mr. Rodman Freitag, September 11.
- HCSA, 1997b, Continuation of Groundwater Monitoring Request, Letter to Mr. Jim DeVos, May 20.
- HCSA, 1998, Quarterly Groundwater Monitoring Report Approval Letter, June 22.
- Lawrence Livermore National Laboratory, 1995a, *Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks*, prepared for California State Water Resources Control Board, October 16.
- Lawrence Livermore National Laboratory, 1995b, *California Leaking Underground Fuel Tank Historical Case Analyses*, prepared for California State Water Resources Control Board, November 16.
- Lawrence Livermore National Laboratory, 1998, *An Evaluation of MTBE Impacts to California Groundwater Resources*, prepared for California State Water Resources Control Board, June 11.
- Personal Communication, 1998, Mr. Rod Freitag of the Alameda General Services Agency, Discussion of the leak detection system at the Alcopark facility, April 15.
- PSI 1998, Soil and Groundwater Investigation, Alcopark Fueling Facility, prepared for Alameda GSA, April 17.
- PSI 1998a, Groundwater Monitoring Report, Third Quarter, 1998, Alcopark Fueling Facility, prepared for Alameda GSA, August 12.
- PSI, 1999, Final Report, Soil And Groundwater Investigation, Alcopark Fueling Facility, prepared for Alameda GSA, October 14.
- PSI, 2000, Quarterly Report, Alcopark Fueling Facility, prepared for Alameda GSA March 6, 2000.
- USGS, 1980, Oakland West, California, topographic map.

**TABLE 1**  
**GROUNDWATER ELEVATION AND ANALYTICAL DATA, SITE NO. 2**  
**ALCOPARK FUELING FACILITY**  
**OAKLAND, CALIFORNIA**

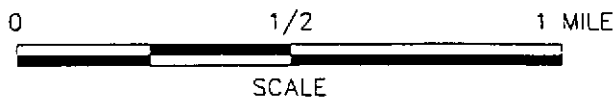
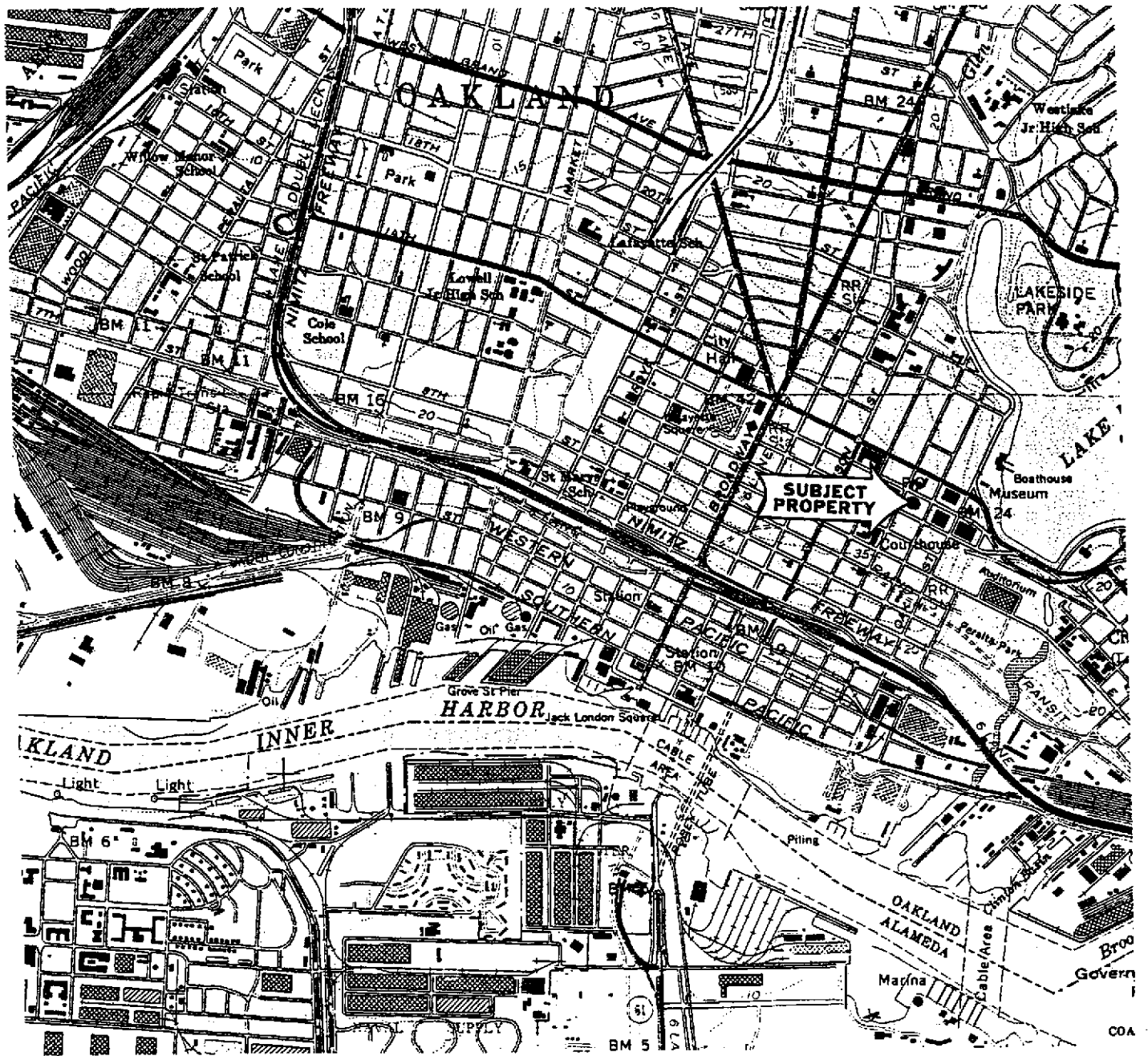
<i>All concentrations in ug/l (PPB).</i>								
Well	Date	Groundwater Elevation	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
W-MW1	3/21/89	12.2	ND	NA	21	3.9	0.4	4.5
W-MW1	7/26/90	12.3	1,400	NA	200	45	ND	53
W-MW1	10/25/90	12.1	1,200	NA	ND	7.3	2.2	46
W-MW1	1/25/91	11.9	270	NA	23	1.5	ND	3.1
W-MW1	4/25/91	11.8	230	NA	ND	ND	ND	ND
W-MW1	8/27/91	11.8	8,300	NA	370	64	ND	120
W-MW1	11/25/91	11.7	810	NA	9.3	ND	7.8	32
W-MW1	6/11/92	12.85	2,600	NA	810	16	21	42
W-MW1	7/16/97	14.36	19,000	ND (150)	1,400	2,800	500	2,600
W-MW1	10/21/97	13.92	14,000	29	1,200	1,000	590	2,800
W-MW1	3/11/98	17.14	NS	NS	NS	NS	NS	NS
W-MW1	4/1/98	17.14	ND (50)	6.3	5.4	ND (0.5)	ND (0.5)	0.82
W-MW1	7/15/98	16.41	71	57	31	ND (0.5)	ND (0.5)	3.1
W-MW1	10/22/98	15.62	5,100	360	520	140	250	950
W-MW1	9/9/99	15.42	2,400	400	680	140	130	370
W-MW1	1/18/00	14.49	4,100	180	420	11	210	350
W-MW1	5/4/00	16.19	NS	NS	NS	NS	NS	NS
W-MW1	8/22/00	15.34	9,400	410	1,200	130	410	920
W-MW1	2/8/01	14.53	NS	NS	NS	NS	NS	NS
W-MW4	3/21/89	12.4	ND	NA	13	1.4	1.0	ND
W-MW4	7/26/90	12.5	NA	NA	0.8	ND	ND	ND
W-MW4	10/25/90	12.2	NA	NA	120	1.2	1.1	0.9
W-MW4	1/25/91	12.0	NA	NA	230	2.8	1.2	2.0
W-MW4	4/25/91	13.0	170	NA	12	ND	ND	2.3
W-MW4	8/27/91	11.8	ND	NA	87	1.3	0.8	0.8
W-MW4	11/25/91	11.8	1,400	NA	ND	1.7	8.6	3.6
W-MW4	6/11/92	12.93	560	NA	150	1.8	1.8	1.1
W-MW4	7/16/97	14.46	50	ND	ND	ND	ND	ND
W-MW4	10/21/97	14.10	ND	ND	ND	ND	ND	ND
W-MW4	3/11/98	17.39	NS	NS	NS	NS	NS	NS
W-MW4	4/1/98	17.40	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW4	7/15/98	16.92	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW4	10/22/98	15.75	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW4	9/9/99	15.57	NS	NS	NS	NS	NS	NS
W-MW4	1/18/00	14.32	NS	NS	NS	NS	NS	NS
W-MW4	5/4/00	16.34	NS	NS	NS	NS	NS	NS
W-MW4	8/22/00	15.47	NS	NS	NS	NS	NS	NS
W-MW4	2/8/01	14.73	NS	NS	NS	NS	NS	NS
W-MW5	3/21/89	12.2	ND	NA	ND	ND	ND	ND
W-MW5	7/26/90	12.4	670	NA	0.8	ND	ND	ND
W-MW5	10/25/90	12.1	120	NA	13	ND	ND	ND
W-MW5	1/25/91	11.9	120	NA	3.2	ND	ND	ND
W-MW5	4/25/91	12.3	ND	NA	ND	ND	ND	ND
W-MW5	8/27/91	11.5	ND	NA	20	ND	0.5	ND
W-MW5	11/25/91	11.7	190	NA	2.7	ND	0.8	2.5
W-MW5	6/11/92	12.85	150	NA	37	ND	ND	ND
W-MW5	7/16/97	14.33	ND	22	ND	ND	ND	ND
W-MW5	10/21/97	13.88	ND	14	ND	ND	ND	ND
W-MW5	3/11/98	17.14	NS	NS	NS	NS	NS	NS
W-MW5	4/1/98	17.14	ND (50)	11	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW5	7/15/98	16.43	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW5	10/22/98	15.60	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)

**TABLE 1  
GROUNDWATER ELEVATION AND ANALYTICAL DATA, SITE NO. 2  
ALCOPARK FUELING FACILITY  
OAKLAND, CALIFORNIA**

<i>All concentrations in ug/l (PPB).</i>								
Well	Date	Groundwater Elevation	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
W-MW5	9/9/99	15.44	NS	NS	NS	NS	NS	NS
W-MW-5	1/18/00	14.67	NS	NS	NS	NS	NS	NS
W-MW-5	5/4/00	16.18	NS	NS	NS	NS	NS	NS
W-MW-5	8/22/00	15.32	NS	NS	NS	NS	NS	NS
W-MW-5	2/8/01	14.53	NS	NS	NS	NS	NS	NS
W-MW6	4/1/98	NA	740	4,600	9.8	3.2	3.0	15
W-MW6	7/15/98	NA	6,200	11,000	280	43	180	350
W-MW6	7/15/98	NA	NA	13,000	ND (500)	ND (500)	ND (500)	ND (500)
W-MW6	10/22/98	NA	4,700	9,600	450	13	200	200
W-MW6	10/22/98	NA	NA	9,100	470	ND (250)	ND (250)	ND (250)
W-MW6	9/9/99	NA	6,600	3,700	2,500	43	310	250
W-MW6	1/18/00	NA	3,500	4,600	800	ND (5.0)	40	13
W-MW6	5/4/00	NA	NS	NS	NS	NS	NS	NS
W-MW6	8/22/00	NA	1,400	1,700	370	4.8	12	35
W-MW6	2/8/01	NA	NS	NS	NS	NS	NS	NS
W-MW7	9/9/99	NA	92	1,200	1.6	ND (0.5)	ND (0.5)	ND (0.5)
W-MW7	1/18/00	NA	ND	2,100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW7	5/4/00	NA	140	1,100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
W-MW7	8/22/00	NA	160	830	0.62	ND (0.5)	ND (0.5)	ND (0.5)
W-MW7	2/8/01	NA	130	650	ND (0.5)	0.53	ND (0.5)	ND (0.5)
W-B1	3/23/98	NA	3,100	4,200	250	18	160	290

**Notes:**

TPH-G denotes Total Petroleum Hydrocarbons as Gasoline. MTBE denotes Methyl tert-Butyl Ether.  
 NA denotes Not Analyzed. NS denotes Not Sampled. ND denotes Not Detected. ( ) denotes detection limit.  
 Data collected prior to 1998 was reported in Alameda County Request for Proposal dated December 2, 1997.  
 Duplicate results presented in italics performed by EPA method 8260.



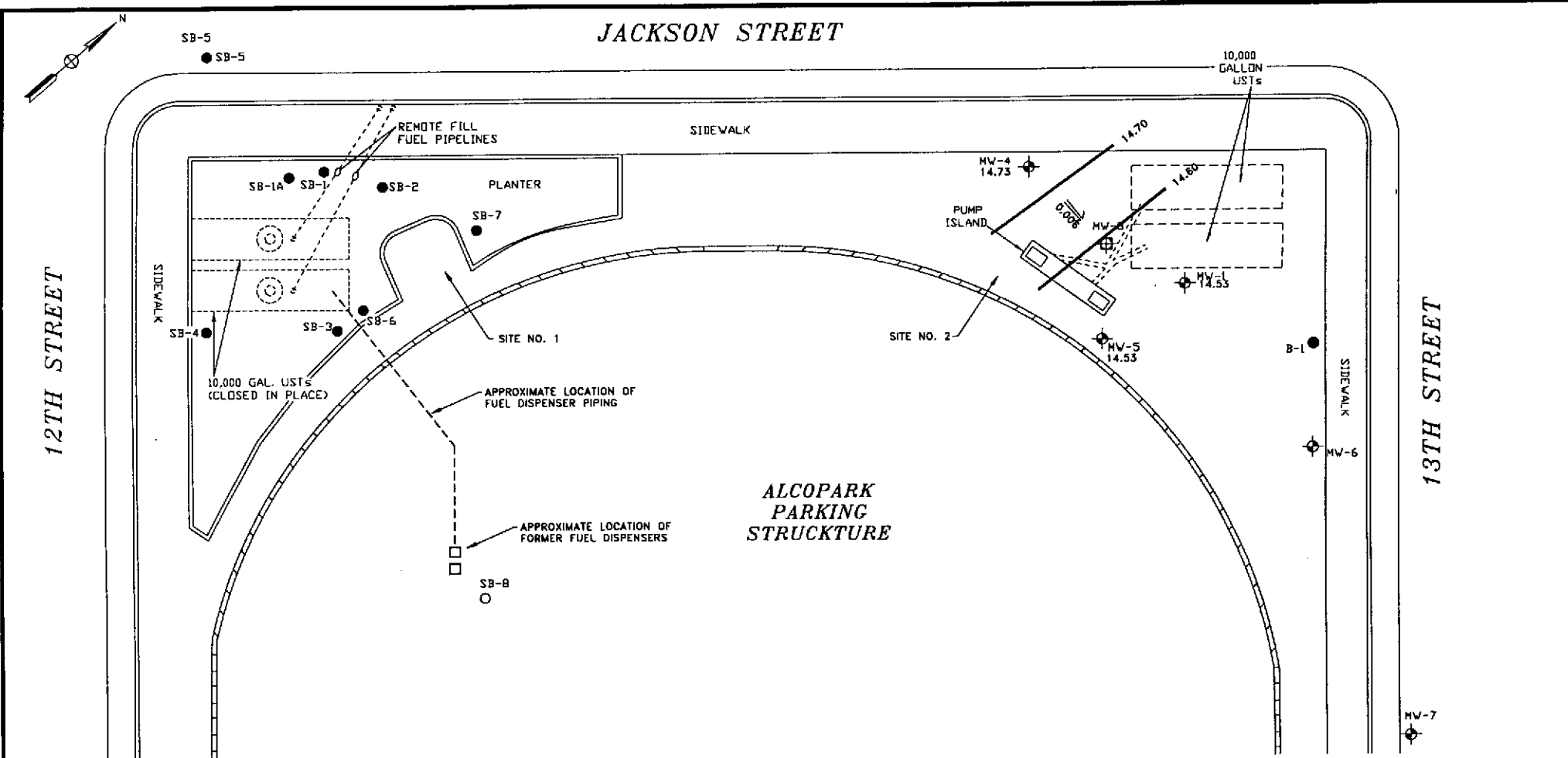
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 PHOTOREVISED 1980

**PSI** ENVIRONMENTAL  
 GEOTECHNICAL  
 CONSTRUCTION  
 CONSULTING • ENGINEERING • TESTING

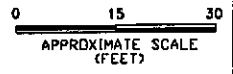
SITE LOCATION  
 ALCOPARK FUELING STATION  
 165 13TH STREET  
 OAKLAND, CALIFORNIA  
 PROJECT NUMBER: 575-9G028

DATE:	CKD BY:	FIGURE NO: 1
FILE NO: 9G028 -1		DRAWN BY: A. CONSTANTINESCU

JACKSON STREET



- LEGEND**
- MW-1 GROUNDWATER MONITORING WELL
  - MW-3 VADOSE MONITORING WELL LOCATION
  - B-1 SOIL BORING
  - UNDERGROUND PIPING
  - GROUNDWATER ELEVATION CONTOUR



<b>psi</b> ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION <small>CONSULTING • ENGINEERING • TESTING</small>		
GROUNDWATER ELEVATION MAP - 2/08/01 ALCOPARK PARKING FACILITY INTERSECTION OF JACKSON AND 13TH STREETS OAKLAND, CALIFORNIA PROJECT NUMBER: 575-9G02B		
DATE: 2/8/01	CKD BY:	FIGURE NO: 2
FILE NO: GW20801		DRAWN BY: A. CONSTANTINESCU

**APPENDIX A**

**GROUNDWATER SAMPLING FIELD PROCEDURES**

## APPENDIX A

### GROUND-WATER SAMPLING

The following procedures will be used for ground water sampling:

1. All equipment shall be washed prior to entering the well with an Alconox solution, followed by two tap water rinses and a deionized water rinse.
2. Prior to purging wells, depth-to-water will be measured using an electronic sounder with an accuracy of approximately 0.01 foot. The measurements will be made to the top of the well casing on the north side.
4. Free floating product thickness and depth-to-ground water will be measured in wells containing free floating product using a Solinst oil-water interface probe to an accuracy of approximately 0.003 meters (0.01 foot). The measurements will be made to the top of the well casing on the north side.
5. Water samples will be collected with a Teflon disposable bailer. In the case of grab groundwater sampling, samples will be collected with a disposable Teflon lined plastic tube equipped with a check valve. The water collected will be immediately decanted into laboratory-supplied vials and bottles. The containers will be overfilled, capped, labeled, and placed in a chilled cooler, prior to delivery to the laboratory for analysis.
6. Chain of custody procedures, including chain of custody forms, will be used to document water sample handling and transport from collection to delivery to the laboratory for analysis.
7. Ground-water samples will be delivered to a State-certified hazardous waste laboratory within approximately 24 hours of collection.



**APPENDIX B**

**LABORATORY REPORT AND CHAIN OF CUSTODY**



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

Professional Service Industries 1320 West Winton Avenue Hayward, CA 94545	Client Project ID: #9G028; Alcopark	Date Sampled: 02/08/01
		Date Received: 02/08/01
	Client Contact: Frank Poss	Date Extracted: 02/08/01
	Client P.O:	Date Analyzed: 02/08/01

02/15/01

Dear Frank:

Enclosed are:

- 1). the results of 1 samples from your #9G028; Alcopark project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

Professional Service Industries 1320 West Winton Avenue Hayward, CA 94545	Client Project ID: #9G028; Alcopark	Date Sampled: 02/08/01
		Date Received: 02/08/01
	Client Contact: Frank Poss	Date Extracted: 02/09-02/13/01
	Client P.O:	Date Analyzed: 02/09-02/13/01

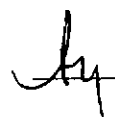
**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with Methyl tert-Butyl Ether\* & BTEX\***  
EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
59741	MW-7	W	130,f	650	ND	0.53	ND	ND	105
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

\* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

\* cluttered chromatogram; sample peak coelutes with surrogate peak

\*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

 Edward Hamilton, Lab Director



### QC REPORT

Date: 02/09/01-02/10/01 Matrix: Water

Extraction: TTLC

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 20801

Instrument: GC-7

Surrogate1	0.000	97.0	95.0	100.00	97	95	2.1
Xylenes	0.000	31.2	31.6	30.00	104	105	1.3
Ethyl Benzene	0.000	10.0	10.0	10.00	100	100	0.0
Toluene	0.000	9.7	9.6	10.00	97	96	1.0
Benzene	0.000	8.8	8.8	10.00	88	88	0.0
MTBE	0.000	8.7	8.4	10.00	87	84	3.5
GAS	0.000	99.7	98.5	100.00	100	99	1.2

SampleID: 20801

Instrument: GC-11 A

Surrogate1	0.000	103.0	102.0	100.00	103	102	1.0
TPH (diesel)	0.000	7950.0	7775.0	7500.00	106	104	2.2

$$\% \text{ Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

**McCAMPBELL ANALYTICAL INC.**

110 2<sup>ND</sup> AVENUE SOUTH, #D7  
 PACHICO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**

RUSH  
  24 HR  
  48 HR  
  72 HR  
  5 DAY

Report To: FRANK ROSS (PSI)  
 Company: PSI  
1320 W. WINTON AVE.  
HAYWARD CA 94515

Bill To: ROO FRIETAG  
ALAMEDA GSA

Tel: (510) 785-1111  
 Project #: 96028  
 Project Location: ALCOPARK  
 Sampler Signature: CHRIS MERRITT

Fax: (510) 785-1192  
 Project Name: ALCOPARK

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other			
MW-7	ALCOPARK	2/8/01	1455	3	VOA	X											

Analysis Request																	Other			Comments	
BTEX & TPH as Gas (602/8020 + 8015) MTBE																					
TPH as Diesel (8015)																					
Total Petroleum Oil & Grease (5520 E&F/B&F)																					
Total Petroleum Hydrocarbons (418.1)																					
EPA 601 / 8010																					
BTEX ONLY (EPA 602 / 8020)																					
EPA 608 / 8080																					
EPA 608 / 8080 PCB'S ONLY																					
EPA 624 / 8240 / 8260																					
EPA 625 / 8270																					
PAH's / PNA's by EPA 625 / 8270 / 8310																					
CAM-17 Metals																					
LUFT 5 Metals																					
Lead (7240/7421/239.2/6010)																					
RCI																					
pH																					
TSS																					
TOC																					
Specific Conductivity																					

+2

59741

Relinquished By: <u>CHRIS MERRITT</u>	Date: <u>2/8/01</u>	Time: <u>1550</u>	Received By: <u>Maria Unzueta</u>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks: ICEA  GOOD CONDITION  HEAD SPACE ABSENT

PRESERVATION APPROPRIATE CONTAINERS

VOAS  U&GT METALS  OTHER