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AKI K. NAKAO, Director

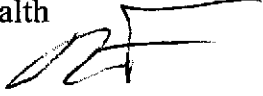
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**Alameda County**

AUG 20 2003

August 15, 2003

**Environmental Health**

TO: Don Hwang, Hazmat Specialist, HCSA-Environmental Health  
FROM: Rod Freitag, Environmental Program Manager, GSA-TSD   
SUBJECT: SEMIANNUAL GROUNDWATER MONITORING REPORT FOR  
ALCOPARK, 165 - 13<sup>TH</sup> STREET, OAKLAND, CA 94612

It's my understanding that you are temporarily replacing Eva Chu as our point of contact for this site. Accordingly, I am submitting to you the enclosed report documenting groundwater monitoring results for the July, 2003 sampling event.

RDF:rdfi:\c&em\prjt\env\7001\July 2003 report transmittal

Enclosure

**Alameda County**

**AUG 20 2003**

**Environmental Health**

**GROUNDWATER MONITORING REPORT  
THIRD QUARTER, 2003  
ALCOPARK FUELING FACILITY  
OAKLAND, CALIFORNIA**

Prepared for

**ALAMEDA COUNTY GENERAL SERVICES AGENCY**

1401 Lakeside Drive, 11<sup>th</sup> Floor  
Oakland, California

Prepared by

**Professional Service Industries, Inc.**

4703 Tidewater Avenue, Suite B  
Oakland, California 94601  
(510) 434-9200

August 14, 2003  
575-0G041

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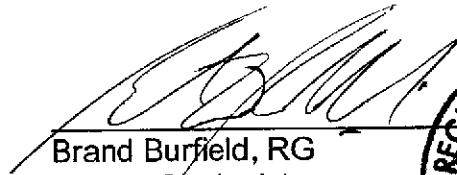
## STATEMENT OF LIMITATIONS AND PROFESSIONAL CERTIFICATION

Information provided in this report, prepared by Professional Service Industries, Inc. (PSI), is intended exclusively for the use of Alameda County General Services Agency (ACGSA), for the evaluation of subsurface conditions as they pertain 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.

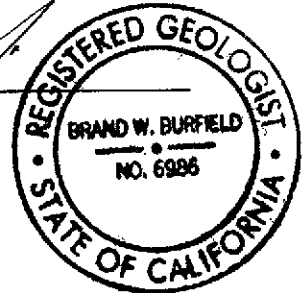
This report is issued with the understanding that ACGSA is responsible for ensuring that the information contained herein is brought to the attention of the appropriate regulatory agency.



Frank R. Poss, REA  
Senior Hydrogeologist



Brand Burfield, RG  
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 (ACHCSA), which requested additional information on the extent of petroleum hydrocarbon impacted groundwater (ACHCSA, 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 wells MW-1, MW-6 and MW-7.
- Prepare a report documenting the field procedures, analytical results, and conclusions regarding the site condition.

### 1.2 SITE BACKGROUND

The ACGSA operates two 10,000-gallon USTs at the Alcopark fueling station to fuel Alameda County vehicles. Three groundwater monitoring wells were installed at the site 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 concluded that contaminants detected on-site had originated from a source area located upgradient of the site. Sampling activities were halted in 1992 pending investigation of an upgradient source (ACGSA, 1997).

In their letter dated May 30, 1997, the ACHCSA instructed ACGSA to resume groundwater monitoring at Alcopark (ACHCSA, 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 (ACGSA, 1997). In their letter dated

September 11, 1997, the ACHCSA directed ACGSA to investigate the extent and stability of the plume.

To better define groundwater conditions downgradient of the USTs, 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 additional small-diameter groundwater monitoring well (MW-7) was installed by PSI in September, 1999 and the analytical results are presented in the PSI report dated October 14, 1999.

ACHCSA issued a letter, dated July 18, 2000, requiring ACGSA to prepare a Site Conceptual Model in accordance with the Regional Water Quality Control Board's final draft "Guideline for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates." The Site Conceptual Model, dated November 10, 2000, indicated that there are no drinking water wells within ½ mile of the site, and Lake Merritt, the nearest surface water receptor, is salt water and not a potential source of drinking water. Based on these findings, it was concluded that, "...an Interim Remedial Action should not be required for the subject site because the migration of MTBE contaminated groundwater to the nearest receptor, Lake Merritt, is unlikely. Furthermore, since no potential drinking water sources are at risk, a risk assessment is not necessary for the site."

After reviewing the Site Conceptual Model report, ACHCSA required that a supplemental fate and transport screening be done to assess potential MTBE impacts on the Lake Merritt ecosystem. On June 8, 2001, a report was issued indicating no expectation of a significant impact on the ecology of Lake Merritt.

Groundwater sampling is currently being conducted semiannually, in accordance with ACHCSA's requirements.

### **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 (ACGSA, 1997).

## **2. GROUNDWATER MONITORING ACTIVITIES**

A PSI representative performed groundwater-monitoring activities on July 15, 2003. The activities were performed in accordance with PSI standard procedures presented in Appendix A, and procedures described in an ACHCSA letter describing collection of samples without purging the wells (ACHCSA, 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 monitoring wells MW-1, MW-4, and MW-5. The groundwater measurements were converted to groundwater elevations and the data plotted on a groundwater elevation map. A groundwater elevation map was prepared for July 15, 2002 (presented as Figure 2). The groundwater elevation data are presented in Table 1 and Appendix A.

PSI's interpretation of the groundwater elevation data indicates the groundwater is flowing to the east under a hydraulic gradient of 0.003. The flow direction is consistent with the flow direction determined for previous quarterly monitoring events.

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

Monitoring wells MW-1, MW-6, and MW-7 were sampled without purging, as requested in the ACHCSA letter dated September 11, 1997. The groundwater samples were collected with disposable polyethylene tubing equipped with a check valve. The groundwater samples were collected according to PSI's standard protocol, included in Appendix A, and were stored in an iced cooler through delivery to the analytical laboratory 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 their 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 #1644). A summary of the analytical methods is presented below.

The groundwater samples collected at the site 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.
- Volatile Organic Compounds by EPA Method 8260.

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 analytical data is summarized in Table 1. Laboratory reports are presented in Appendix B.

VOCs and/or MTBE were detected in groundwater samples from all three groundwater-monitoring wells sampled for this monitoring event.

- TPH-G was detected only in Wells MW-1 (370 ug/l) and MW-6 (4,100 ug/l).
- Benzene was detected in Wells MW-1 (31 ug/l) and MW-6 (2,200 ug/l). The benzene concentrations have increased in MW-1 and MW-6 since the previous sampling event. Figure 3 depicts the benzene concentration with time in MW-1, MW-6, and MW-7. Benzene concentrations have varied with time and have not shown a consistent overall trend.
- MTBE was detected in Wells MW-1 (4.6 ug/l), MW-6 (1,200 ug/l) and MW-7 (140 ug/l). Figure 4 depicts the MTBE concentration with time in MW-1, MW-6, and MW-7. MTBE concentrations have generally declined at the site since groundwater monitoring commenced.



- Additional VOCs, commonly associated with gasoline impacted groundwater, were detected in the groundwater samples. The maximum concentrations for each of the additional VOCs detected are presented below.
  - Naphthalene at 300 ug/L in MW-6
  - 1,2,4 Trimethylbenzene at 89 ug/L in MW-6
  - Xylenes at 260 ug/L in MW-6
  - Tert-Amyl methyl ether (TAME) at 180 ug/L in MW-6

#### 4. CONCLUSIONS

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

- Groundwater elevations measured at the site range from approximately 14.80 to 14.94 feet above msl.
- Groundwater flow direction is to the east with a gradient of 0.003.
- The groundwater samples collected from wells MW-1, MW-6 and MW-7 contained measurable concentrations of TPH-G and/or VOCs with MTBE and benzene being the primary contaminants of concern. Concentrations are generally higher than the previous sampling event.

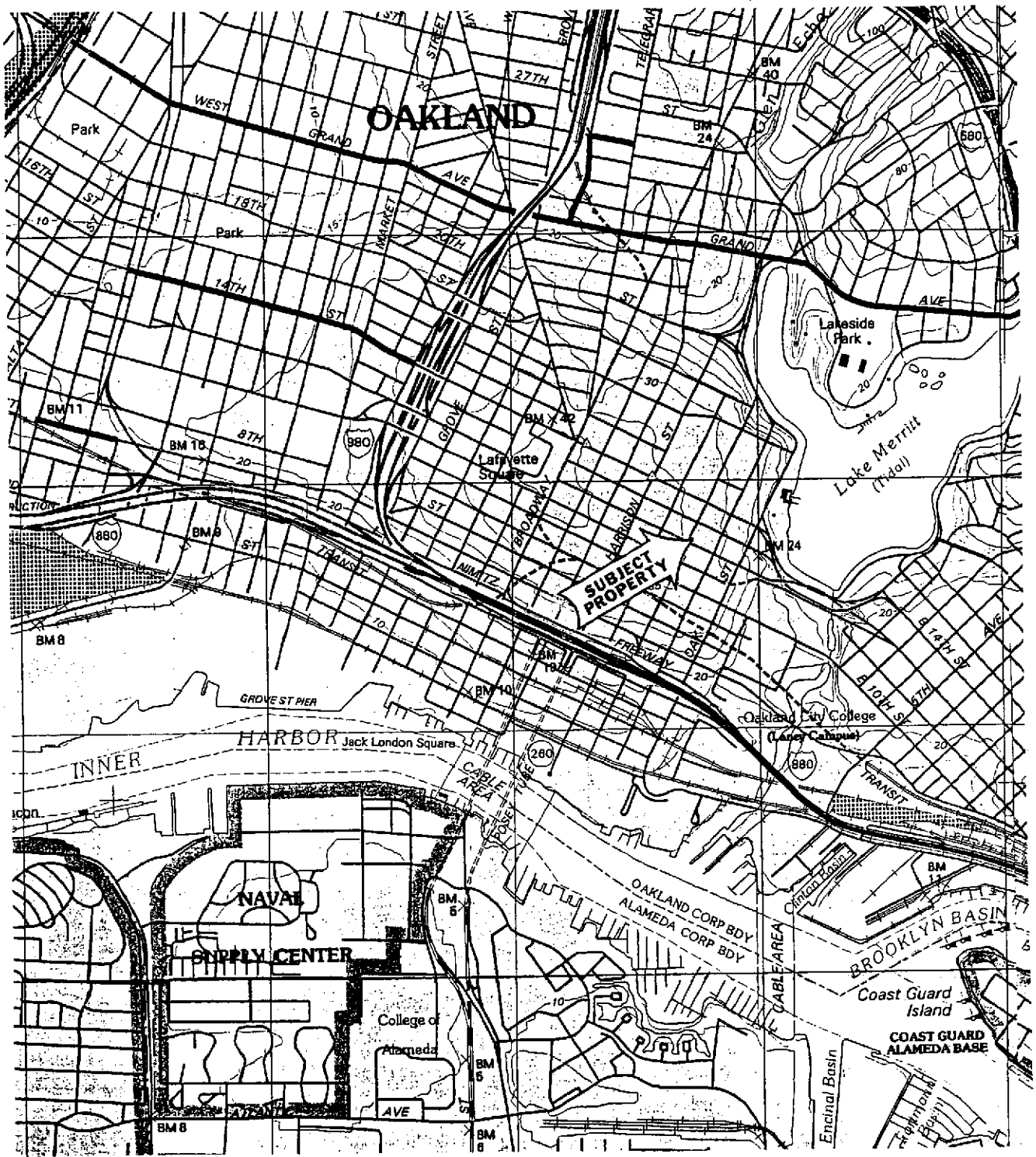
## REFERENCES

ACGSA, 1997, Request For Proposal (RFP) for Groundwater Services, December 2.

ACHCSA, 1997a, Workplan Request Letter to Mr. Rodman Freitag, September 11.

ACHCSA, 1997b, Continuation of Groundwater Monitoring Request, Letter to Mr. Jim DeVos, May 20.

USGS, 1980, Oakland West, California, topographic map.



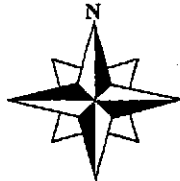
**PSI** Environmental  
**Geotechnical**  
**Construction**  
 Consulting • Engineering • Testing

**FIGURE 1 - SITE LOCATION MAP**  
 Former Alcopark Fueling Facility  
 Jackson and 12<sup>th</sup> Streets  
 Oakland, California

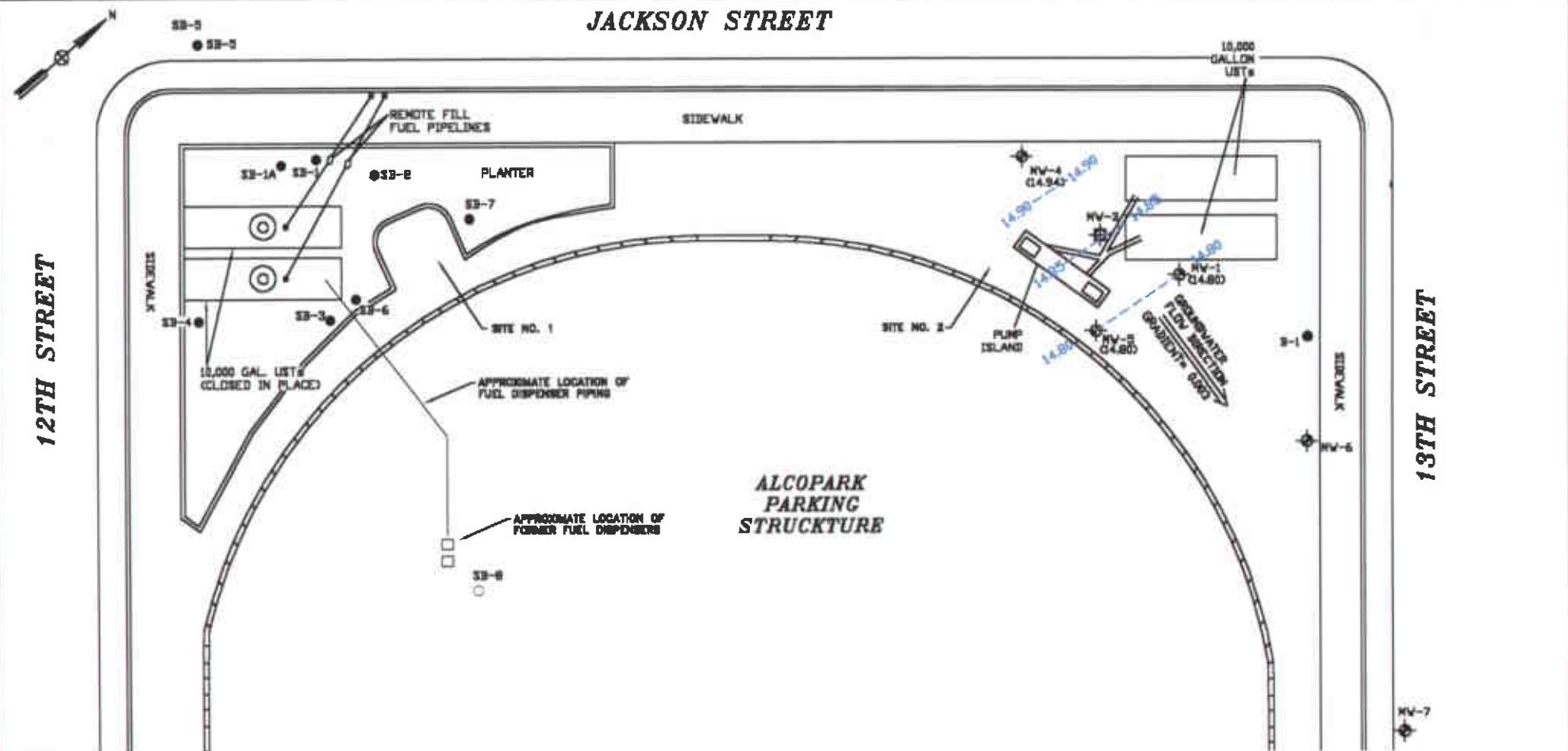
PROJECT NO.:  
 9G004

SOURCE:  
 USGS Topographic Maps  
 Oakland West, CA  
 Oakland East, CA

DATE:  
 Photorevised 1993

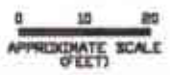


**JACKSON STREET**



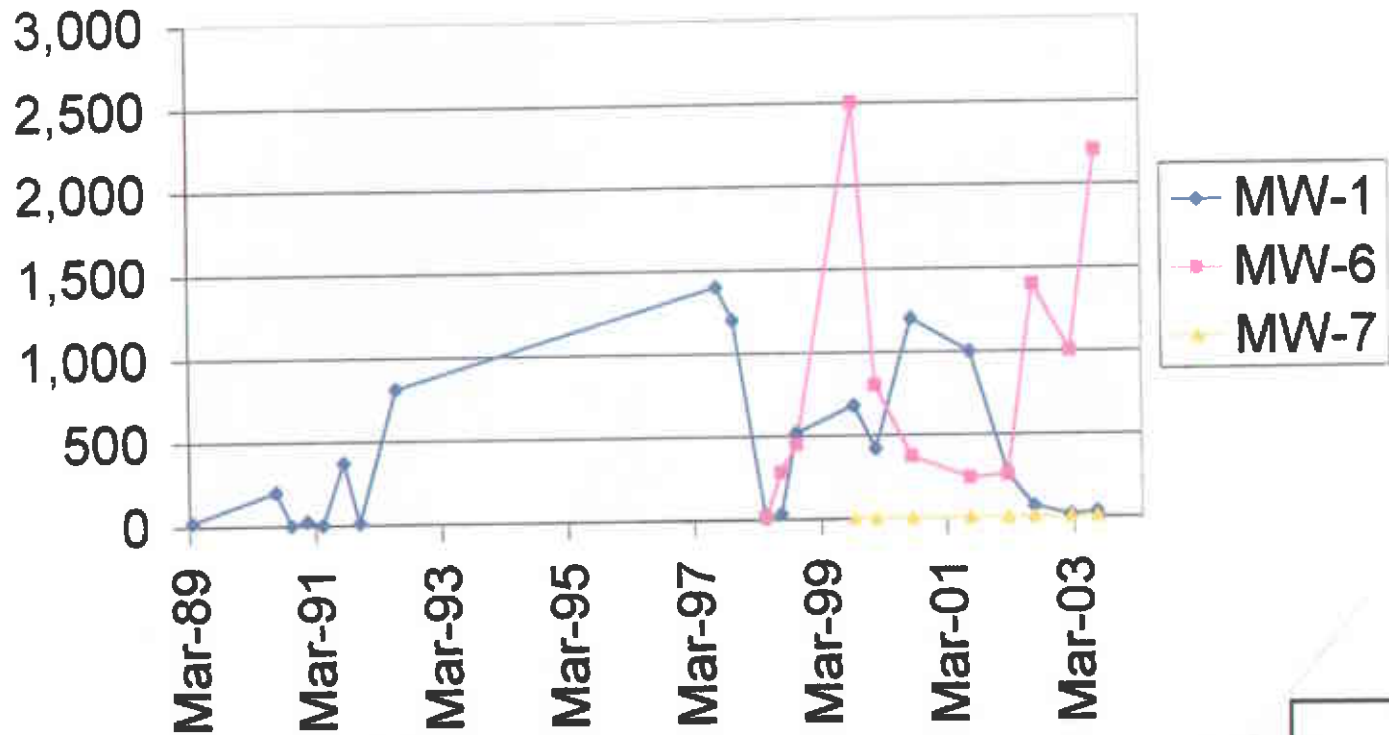
**LEGEND:**

- MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION INDICATED IN FEET MSL
- GROUNDWATER CONTOUR (ELEVATION INDICATED IN FEET MSL)
- VADOSE MONITORING WELL LOCATION
- SOIL BORING
- UNDERGROUND PIPING



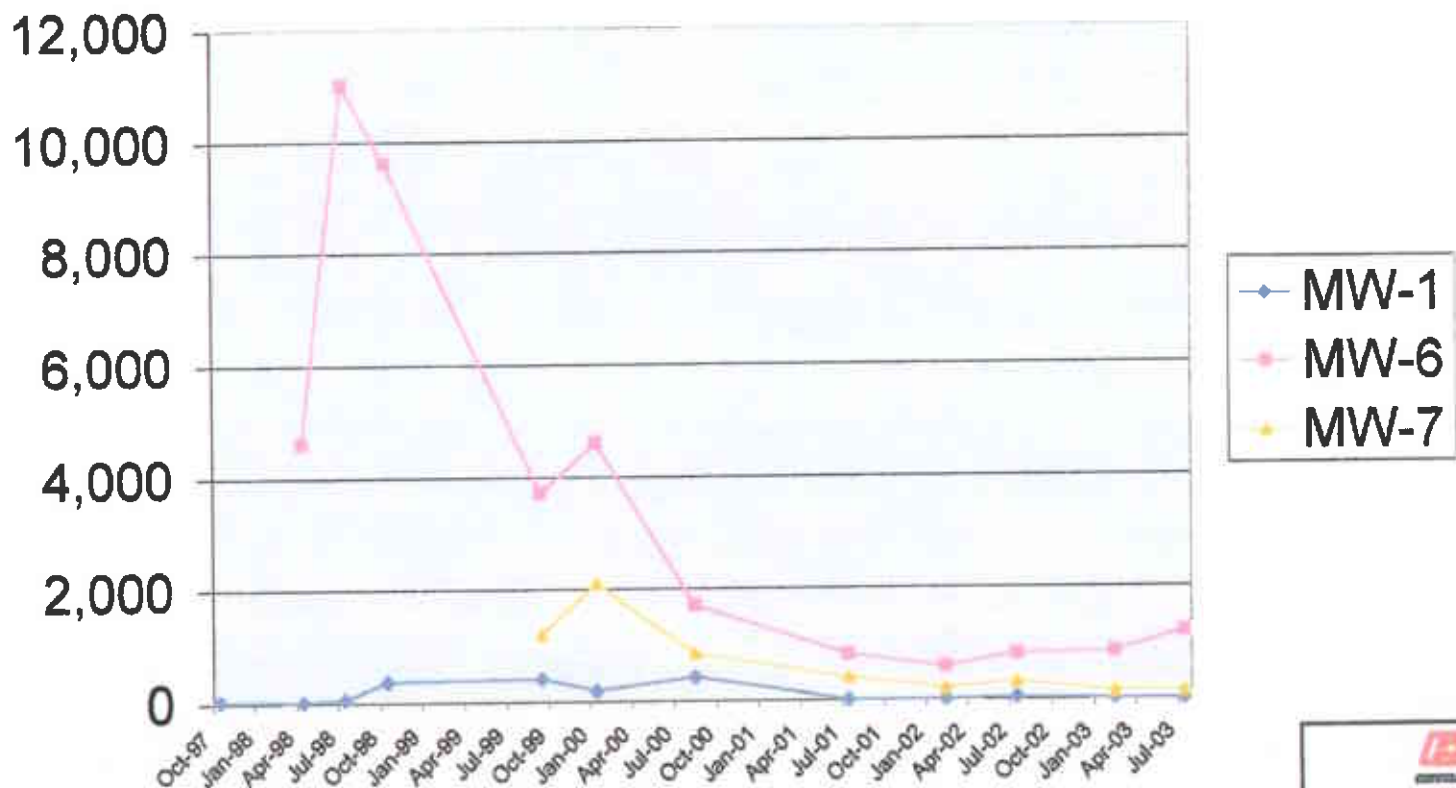
<b>DSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION CONSULTING - ENGINEERING - TESTING</b>		
GROUNDWATER ELEVATION MAP - 7/15/03 ALCOPARK PARKING FACILITY INTERSECTION OF JACKSON AND 13TH STREETS OAKLAND, CALIFORNIA PROJECT NUMBER: 575-90028		
DATE: 7/03	CKD BY: F.P.	FIGURE NO.: 3
FILE NO.: 90028-08		DRAWN BY: B. STOZER


## Benzene Concentrations (ug/L)



<b>ENVIRONMENTAL GEOTECHNICAL</b> <small>REGULATORY - SUPERFUNDATION DIVISION</small>		
<b>BENZENE VS. TIME</b> ALCOPARK PARKING FACILITY INTERSECTION OF JACKSON AND 13TH STREETS OAKLAND, CALIFORNIA PROJECT NUMBER: 575-90028		
DATE: 3/03	CND BY: F.F.	FIGURE NO.: 3
FILE NO.: 6058-05		DRAWN BY: S. STOKER

# MTBE Concentrations (ug/L)



 <b>ENVIRONMENTAL SERVICES</b> <small>CONSULTING - INVESTIGATION - DESIGN</small>		
<b>MTBE VS. TIME</b> <b>ALCOPARK PARKING FACILITY</b> <b>INTERSECTION OF JACKSON AND 13TH STREETS</b> <b>OAKLAND, CALIFORNIA</b> <b>PROJECT NUMBER: 875-90028</b>		
DATE: 8/03	CRD BY: F.J.	FIGURE NO.: 4
FILE NO.: 87588-08		DRAWN BY: S. STODOL

**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
MW-1	3/21/1989	12.2	ND	NA	21	3.9	0.4	4.5
MW-1	7/26/1990	12.3	1,400	NA	200	45	ND	53
MW-1	10/25/1990	12.1	1,200	NA	ND	7.3	2.2	46
MW-1	1/25/1991	11.9	270	NA	23	1.5	ND	3.1
MW-1	4/25/1991	11.8	230	NA	ND	ND	ND	ND
MW-1	8/27/1991	11.8	8,300	NA	370	84	ND	120
MW-1	11/25/1991	11.7	810	NA	9.3	ND	7.8	32
MW-1	6/11/1992	12.85	2,600	NA	810	16	21	42
MW-1	7/16/1997	14.36	19,000	ND (150)	1,400	2,800	500	2,600
MW-1	10/21/1997	13.92	14,000	29	1,200	1,000	590	2,800
MW-1	3/11/1998	17.14	NS	NS	NS	NS	NS	NS
MW-1	4/1/1998	17.14	ND (50)	6.3	5.4	ND (0.5)	ND (0.5)	0.82
MW-1	7/15/1998	16.41	71	57	31	ND (0.5)	ND (0.5)	3.1
MW-1	10/22/1998	15.62	5,100	360	520	140	250	950
MW-1	9/9/1999	15.42	2,400	400	680	140	130	370
MW-1	1/18/2000	14.49	4,100	180	420	11	210	350
MW-1	5/4/2000	16.19	NS	NS	NS	NS	NS	NS
MW-1	8/22/2000	15.34	9,400	410	1,200	130	410	920
MW-1	2/8/2001	14.53	NS	NS	NS	NS	NS	NS
MW-1	7/20/2001	14.60	9,600	ND (50)	1,000	300	350	2,000
MW-1	2/18/2002	15.08	1,500	ND (100)	260	6.5	2.8	49
MW-1	7/19/2002	14.84	180	28	68	ND (1.7)	ND (1.7)	6.8
MW-1	2/10/2003	14.83	210	11	14	0.75	ND (0.5)	4.0
MW-1	7/15/2003	14.80	370	4.6	31	0.99	22	75
MW-4	3/21/1989	12.4	ND	NA	13	1.4	1.0	ND
MW-4	7/26/1990	12.5	NA	NA	0.8	ND	ND	ND
MW-4	10/25/1990	12.2	NA	NA	120	1.2	1.1	0.9
MW-4	1/25/1991	12.0	NA	NA	230	2.8	1.2	2.0
MW-4	4/25/1991	13.0	170	NA	12	ND	ND	2.3
MW-4	8/27/1991	11.8	ND	NA	87	1.3	0.8	0.8
MW-4	11/25/1991	11.8	1,400	NA	ND	1.7	8.6	3.6
MW-4	6/11/1992	12.93	560	NA	150	1.8	1.8	1.1
MW-4	7/16/1997	14.46	50	ND	ND	ND	ND	ND
MW-4	10/21/1997	14.10	ND	ND	ND	ND	ND	ND
MW-4	3/11/1998	17.39	NS	NS	NS	NS	NS	NS
MW-4	4/1/1998	17.40	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-4	7/15/1998	16.92	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-4	10/22/1998	15.75	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-4	9/9/1999	15.57	NS	NS	NS	NS	NS	NS
MW-4	1/18/2000	14.32	NS	NS	NS	NS	NS	NS
MW-4	5/4/2000	16.34	NS	NS	NS	NS	NS	NS
MW-4	8/22/2000	15.47	NS	NS	NS	NS	NS	NS
MW-4	2/8/2001	14.73	NS	NS	NS	NS	NS	NS
MW-4	7/20/2001	14.72	NS	NS	NS	NS	NS	NS
MW-4	2/18/2002	15.05	NS	NS	NS	NS	NS	NS
MW-4	7/19/2002	14.97	NS	NS	NS	NS	NS	NS
MW-4	2/10/2003	14.94	NS	NS	NS	NS	NS	NS
MW-4	7/15/2003	14.94	NS	NS	NS	NS	NS	NS
MW-5	3/21/1989	12.2	ND	NA	ND	ND	ND	ND
MW-5	7/26/1990	12.4	670	NA	0.8	ND	ND	ND
MW-5	10/25/1990	12.1	120	NA	13	ND	ND	ND
MW-5	1/25/1991	11.9	120	NA	3.2	ND	ND	ND
MW-5	4/25/1991	12.3	ND	NA	ND	ND	ND	ND
MW-5	8/27/1991	11.5	ND	NA	20	ND	0.5	ND
MW-5	11/25/1991	11.7	190	NA	2.7	ND	0.8	2.5
MW-5	6/11/1992	12.85	150	NA	37	ND	ND	ND
MW-5	7/16/1997	14.33	ND	22	ND	ND	ND	ND
MW-5	10/21/1997	13.88	ND	14	ND	ND	ND	ND
MW-5	3/11/1998	17.14	NS	NS	NS	NS	NS	NS

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

All concentrations in ug/l (PPB).								
Well	Date	Groundwater Elevation	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-5	4/1/1998	17.14	ND (50)	11	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-5	7/15/1998	16.43	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-5	10/22/1998	15.60	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-5	9/9/1999	15.44	NS	NS	NS	NS	NS	NS
MW-5	1/18/2000	14.67	NS	NS	NS	NS	NS	NS
MW-5	5/4/2000	16.18	NS	NS	NS	NS	NS	NS
MW-5	8/22/2000	15.32	NS	NS	NS	NS	NS	NS
MW-5	2/8/2001	14.53	NS	NS	NS	NS	NS	NS
MW-5	7/20/2001	14.59	NS	NS	NS	NS	NS	NS
MW-5	2/18/2002	14.94	NS	NS	NS	NS	NS	NS
MW-5	7/19/2002	14.83	NS	NS	NS	NS	NS	NS
MW-5	2/10/2003	14.83	NS	NS	NS	NS	NS	NS
MW-5	7/15/2003	14.80	NS	NS	NS	NS	NS	NS
MW-6	4/1/1998	NA	740	4,600	9.8	3.2	3.0	15
MW-6	7/15/1998	NA	6,200	11,000	280	43	180	350
MW-6	7/15/1998	NA	NA	13,000	ND (500)	ND (500)	ND (500)	ND (500)
MW-6	10/22/1998	NA	4,700	9,600	450	13	200	200
MW-6	10/22/1998	NA	NA	9,100	470	ND (250)	ND (250)	ND (250)
MW-6	9/9/1999	NA	6,600	3,700	2,500	43	310	250
MW-6	1/18/2000	NA	3,500	4,600	800	ND (5.0)	40	13
MW-6	5/4/2000	NA	NS	NS	NS	NS	NS	NS
MW-6	8/22/2000	NA	1,400	1,700	370	4.8	12	35
MW-6	2/8/2001	NA	NS	NS	NS	NS	NS	NS
MW-6	7/20/2001	NA	1,100	800	240	2.9	2.3	3.4
MW-6	2/18/2002	NA	1,500	570	260	ND (2.0)	11	4.3
MW-6	7/19/2002	NA	1,800	800	1400	ND (50)	ND (50)	ND (50)
MW-6	2/10/2003	NA	4,000	830	1000	ND (50)	ND (50)	ND (50)
MW-6	7/15/2003	NA	4,100	1200	2200	ND (25)	180	260
MW-7	9/9/1999	NA	92	1,200	1.6	ND (0.5)	ND (0.5)	ND (0.5)
MW-7	1/18/2000	NA	ND	2,100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-7	5/4/2000	NA	140	1,100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-7	8/22/2000	NA	160	830	0.62	ND (0.5)	ND (0.5)	ND (0.5)
MW-7	2/8/2001	NA	130	650	ND (0.5)	0.53	ND (0.5)	ND (0.5)
MW-7	7/20/2001	NA	56	400	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-7	2/18/2002	NA	ND (50)	200	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
MW-7	7/19/2002	NA	ND (50)	300	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
MW-7	2/10/2003	NA	ND (50)	140	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
MW-7	7/15/2003	NA	ND (50)	140	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)
W-B1	3/23/1998	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.



**APPENDIX A**

**GROUNDWATER SAMPLING FIELD PROCEDURES & WATER ELEVATIONS**

## 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**

Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #OG041; Alco Park	Date Sampled: 07/15/03
		Date Received: 07/16/03
	Client Contact: Brian Storek	Date Reported: 07/23/03
	Client P.O.:	Date Completed: 07/23/03

**WorkOrder: 0307253**

July 23, 2003

Dear Brian:

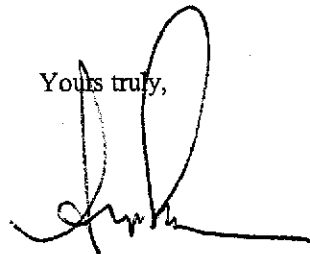
Enclosed are:

- 1). the results of 3 analyzed samples from your #OG041; Alco Park 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. McC Campbell 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,



Angela Rydelius, Lab Manager



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
http://www.mcccampbell.com E-mail: main@mcccampbell.com

Professional Service Industries 4703 Tidewater Ave., Suite B Oakland, CA 94601	Client Project ID: #OG041; Alco Park	Date Sampled: 07/15/03
		Date Received: 07/16/03
	Client Contact: Brian Storek	Date Extracted: 07/17/03-07/22/03
	Client P.O.:	Date Analyzed: 07/17/03-07/22/03

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0307253

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	370,a	ND	23	0.72	16	63	1	100
002A	MW-6	W	4100,a	1000	1200	7.2	57	61	10	105
003A	MW-7	W	ND	120	ND	ND	ND	ND	1	100


Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	NA	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell 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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

 Angela Rydelius, Lab Manager



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Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #OG041; Alco Park	Date Sampled: 07/15/03
		Date Received: 07/16/03
	Client Contact: Brian Storek	Date Extracted: 07/17/03-07/22/03
	Client P.O.:	Date Analyzed: 07/17/03-07/22/03

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline \***

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0307253

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
001A	MW-1	W	370,a	1	100
002A	MW-6	W	4100,a	10	105
003A	MW-7	W	ND	1	100

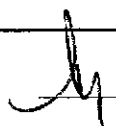
Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/studge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell 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 (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

 Angela Rydelius, Lab Manager



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Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #OG041; Alco Park	Date Sampled: 07/15/03
		Date Received: 07/16/03
	Client Contact: Brian Storek	Date Extracted: 07/17/03
	Client P.O.:	Date Analyzed: 07/17/03

**Volatiles Organics + Oxygenates by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0307253

Lab ID	0307253-001B
Client ID	MW-1
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	tert-Amyl methyl ether (TAME)	1.0	1.0	0.5
Benzene	31	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	1.0	t-Butyl alcohol (TBA)	12	1.0	5.0
n-Butyl benzene	1.3	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	0.5
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	0.71	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	22	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Hexachlorobutadiene	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Iodomethane (Methyl iodide)	ND	1.0	5.0	Isopropylbenzene	2.1	1.0	0.5
4-Isopropyl toluene	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	4.6	1.0	0.5
Methylene chloride	ND	1.0	0.5	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5
Naphthalene	14	1.0	0.5	n-Propyl benzene	4.9	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	0.99	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	37	1.0	0.5	1,3,5-Trimethylbenzene	9.6	1.0	0.5
Vinyl Acetate	ND	1.0	5.0	Vinyl Chloride	ND	1.0	0.5
Xylenes	75	1.0	0.5				

**Surrogate Recoveries (%)**

%SS1:	103	%SS2:	99.1
%SS3:	97.4		

**Comments:**

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.



Professional Service Industries 4703 Tidewater Ave., Suite B Oakland, CA 94601	Client Project ID: #OG041; Alco Park	Date Sampled: 07/15/03
		Date Received: 07/16/03
	Client Contact: Brian Storek	Date Extracted: 07/17/03
	Client P.O.:	Date Analyzed: 07/17/03

**Volatiles Organics + Oxygenates by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0307253

Lab ID	0307253-002B
Client ID	MW-6
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<250	50	5.0	tert-Amyl methyl ether (TAME)	180	50	0.5
Benzene	2200	50	0.5	Bromobenzene	ND<25	50	0.5
Bromochloromethane	ND<25	50	0.5	Bromodichloromethane	ND<25	50	0.5
Bromoform	ND<25	50	0.5	Bromomethane	ND<25	50	0.5
2-Butanone (MEK)	ND<50	50	1.0	t-Butyl alcohol (TBA)	480	50	5.0
n-Butyl benzene	ND<25	50	0.5	sec-Butyl benzene	ND<25	50	0.5
tert-Butyl benzene	ND<25	50	0.5	Carbon Disulfide	ND<25	50	0.5
Carbon Tetrachloride	ND<25	50	0.5	Chlorobenzene	ND<25	50	0.5
Chloroethane	ND<25	50	0.5	2-Chloroethyl Vinyl Ether	ND<25	50	0.5
Chloroform	ND<25	50	0.5	Chloromethane	ND<25	50	0.5
2-Chlorotoluene	ND<25	50	0.5	4-Chlorotoluene	ND<25	50	0.5
Dibromochloromethane	ND<25	50	0.5	1,2-Dibromo-3-chloropropane	ND<25	50	0.5
1,2-Dibromoethane (EDB)	ND<25	50	0.5	Dibromomethane	ND<25	50	0.5
1,2-Dichlorobenzene	ND<25	50	0.5	1,3-Dichlorobenzene	ND<25	50	0.5
1,4-Dichlorobenzene	ND<25	50	0.5	Dichlorodifluoromethane	ND<25	50	0.5
1,1-Dichloroethane	ND<25	50	0.5	1,2-Dichloroethane (1,2-DCA)	ND<25	50	0.5
1,1-Dichloroethene	ND<25	50	0.5	cis-1,2-Dichloroethene	ND<25	50	0.5
trans-1,2-Dichloroethene	ND<25	50	0.5	1,2-Dichloropropane	ND<25	50	0.5
1,3-Dichloropropane	ND<25	50	0.5	2,2-Dichloropropane	ND<25	50	0.5
1,1-Dichloropropene	ND<25	50	0.5	cis-1,3-Dichloropropene	ND<25	50	0.5
trans-1,3-Dichloropropene	ND<25	50	0.5	Diisopropyl ether (DIPE)	ND<25	50	0.5
Ethylbenzene	180	50	0.5	Ethyl tert-butyl ether (ETBE)	ND<25	50	0.5
Hexachlorobutadiene	ND<25	50	0.5	2-Hexanone	ND<25	50	0.5
Iodomethane (Methyl iodide)	ND<250	50	5.0	Isopropylbenzene	ND<25	50	0.5
4-Isopropyl toluene	ND<25	50	0.5	Methyl-t-butyl ether (MTBE)	1200	50	0.5
Methylene chloride	ND<25	50	0.5	4-Methyl-2-pentanone (MIBK)	ND<25	50	0.5
Naphthalene	300	50	0.5	n-Propyl benzene	ND<25	50	0.5
Styrene	ND<25	50	0.5	1,1,1,2-Tetrachloroethane	ND<25	50	0.5
1,1,2,2-Tetrachloroethane	ND<25	50	0.5	Tetrachloroethene	ND<25	50	0.5
Toluene	ND<25	50	0.5	1,2,3-Trichlorobenzene	ND<25	50	0.5
1,2,4-Trichlorobenzene	ND<25	50	0.5	1,1,1-Trichloroethane	ND<25	50	0.5
1,1,2-Trichloroethane	ND<25	50	0.5	Trichloroethene	ND<25	50	0.5
Trichlorofluoromethane	ND<25	50	0.5	1,2,3-Trichloropropane	ND<25	50	0.5
1,2,4-Trimethylbenzene	89	50	0.5	1,3,5-Trimethylbenzene	ND<25	50	0.5
Vinyl Acetate	ND<250	50	5.0	Vinyl Chloride	ND<25	50	0.5
Xylenes	260	50	0.5				

**Surrogate Recoveries (%)**

%SS1:	105	%SS2:	101
%SS3:	106		

**Comments:**

\* water and vapor samples and all TCLP & SPL extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.





Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #OG041; Alco Park	Date Sampled: 07/15/03
		Date Received: 07/16/03
	Client Contact: Brian Storek	Date Extracted: 07/17/03
	Client P.O.:	Date Analyzed: 07/17/03

**Volatiles Organics + Oxygenates by P&T and GC/MS (Basic Target List)\***

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0307253

Lab ID	0307253-003B
Client ID	MW-7
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<25	5.0	5.0	tert-Amyl methyl ether (TAME)	7.5	5.0	0.5
Benzene	ND<2.5	5.0	0.5	Bromobenzene	ND<2.5	5.0	0.5
Bromochloromethane	ND<2.5	5.0	0.5	Bromodichloromethane	ND<2.5	5.0	0.5
Bromoform	ND<2.5	5.0	0.5	Bromomethane	ND<2.5	5.0	0.5
2-Butanone (MEK)	ND<5.0	5.0	1.0	t-Butyl alcohol (TBA)	ND<25	5.0	5.0
n-Butyl benzene	ND<2.5	5.0	0.5	sec-Butyl benzene	ND<2.5	5.0	0.5
tert-Butyl benzene	ND<2.5	5.0	0.5	Carbon Disulfide	ND<2.5	5.0	0.5
Carbon Tetrachloride	ND<2.5	5.0	0.5	Chlorobenzene	ND<2.5	5.0	0.5
Chloroethane	ND<2.5	5.0	0.5	2-Chloroethyl Vinyl Ether	ND<2.5	5.0	0.5
Chloroform	ND<2.5	5.0	0.5	Chloromethane	ND<2.5	5.0	0.5
2-Chlorotoluene	ND<2.5	5.0	0.5	4-Chlorotoluene	ND<2.5	5.0	0.5
Dibromochloromethane	ND<2.5	5.0	0.5	1,2-Dibromo-3-chloropropane	ND<2.5	5.0	0.5
1,2-Dibromoethane (EDB)	ND<2.5	5.0	0.5	Dibromomethane	ND<2.5	5.0	0.5
1,2-Dichlorobenzene	ND<2.5	5.0	0.5	1,3-Dichlorobenzene	ND<2.5	5.0	0.5
1,4-Dichlorobenzene	ND<2.5	5.0	0.5	Dichlorodifluoromethane	ND<2.5	5.0	0.5
1,1-Dichloroethane	ND<2.5	5.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND<2.5	5.0	0.5
1,1-Dichloroethene	ND<2.5	5.0	0.5	cis-1,2-Dichloroethene	ND<2.5	5.0	0.5
trans-1,2-Dichloroethene	ND<2.5	5.0	0.5	1,2-Dichloropropane	ND<2.5	5.0	0.5
1,3-Dichloropropane	ND<2.5	5.0	0.5	2,2-Dichloropropane	ND<2.5	5.0	0.5
1,1-Dichloropropene	ND<2.5	5.0	0.5	cis-1,3-Dichloropropene	ND<2.5	5.0	0.5
trans-1,3-Dichloropropene	ND<2.5	5.0	0.5	Diisopropyl ether (DIPE)	ND<2.5	5.0	0.5
Ethylbenzene	ND<2.5	5.0	0.5	Ethyl tert-butyl ether (ETBE)	ND<2.5	5.0	0.5
Hexachlorobutadiene	ND<2.5	5.0	0.5	2-Hexanone	ND<2.5	5.0	0.5
Iodomethane (Methyl iodide)	ND<25	5.0	5.0	Isopropylbenzene	ND<2.5	5.0	0.5
4-Isopropyl toluene	ND<2.5	5.0	0.5	Methyl-t-butyl ether (MTBE)	140	5.0	0.5
Methylene chloride	ND<2.5	5.0	0.5	4-Methyl-2-pentanone (MIBK)	ND<2.5	5.0	0.5
Naphthalene	ND<2.5	5.0	0.5	n-Propyl benzene	ND<2.5	5.0	0.5
Styrene	ND<2.5	5.0	0.5	1,1,1,2-Tetrachloroethane	ND<2.5	5.0	0.5
1,1,2,2-Tetrachloroethane	ND<2.5	5.0	0.5	Tetrachloroethene	ND<2.5	5.0	0.5
Toluene	ND<2.5	5.0	0.5	1,2,3-Trichlorobenzene	ND<2.5	5.0	0.5
1,2,4-Trichlorobenzene	ND<2.5	5.0	0.5	1,1,1-Trichloroethane	ND<2.5	5.0	0.5
1,1,2-Trichloroethane	ND<2.5	5.0	0.5	Trichloroethene	ND<2.5	5.0	0.5
Trichlorofluoromethane	ND<2.5	5.0	0.5	1,2,3-Trichloropropane	ND<2.5	5.0	0.5
1,2,4-Trimethylbenzene	ND<2.5	5.0	0.5	1,3,5-Trimethylbenzene	ND<2.5	5.0	0.5
Vinyl Acetate	ND<25	5.0	5.0	Vinyl Chloride	ND<2.5	5.0	0.5
Xylenes	ND<2.5	5.0	0.5				

**Surrogate Recoveries (%)**

%SS1:	102	%SS2:	99.0
%SS3:	95.4		

**Comments:**

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.



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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

### QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W

WorkOrder: 0307253

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 7835			Spiked Sample ID: 0307254-001A			
	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex) <sup>£</sup>	22.79	60	131, F1	141, F1	5.64	107	107	0	70	130
MTBE	62.46	10	NR	NR	NR	99.2	101	1.30	70	130
Benzene	0.6751	10	106	105	0.447	99.8	96.7	3.20	70	130
Toluene	0.5749	10	100	102	1.45	95.2	92.5	2.91	70	130
Ethylbenzene	ND	10	105	105	0	106	103	2.63	70	130
Xylenes	ND	30	96.7	100	3.39	100	95.7	4.43	70	130
%SS:	116	100	112	108	3.14	99.7	99.3	0.352	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

F1 = MS / MSD exceed acceptance criteria. LCS - LCSD validate prep batch.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

$$\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) * 2.$$

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



McC Campbell Analytical Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 http://www.mcccampbell.com E-mail: main@mcccampbell.com

### QC SUMMARY REPORT FOR SW8260B

Matrix: W

WorkOrder: 0307253

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 7838			Spiked Sample ID: 0307254-005B		
	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
tert-Amyl methyl ether (TAME)	ND	10	92.7	94.6	1.93	91.4	95.2	4.05	70	130
Benzene	ND	10	104	110	6.02	103	102	1.09	70	130
Chlorobenzene	ND	10	111	110	0.882	108	112	3.54	70	130
1,1-Dichloroethene	ND	10	90.7	97.1	6.86	91.6	91.4	0.255	70	130
Diisopropyl ether (DIPE)	ND	10	100	104	4.14	99.3	99.6	0.294	70	130
Ethyl tert-butyl ether (ETBE)	ND	10	92.8	92.8	0	90.5	91.2	0.778	70	130
Methyl-t-butyl ether (MTBE)	1.393	10	82.9	94.4	11.2	94.1	94.7	0.664	70	130
Toluene	ND	10	127	127	0	123	128	3.78	70	130
Trichloroethene	ND	10	103	110	6.57	102	105	2.64	70	130
%SS1:	101	100	96.9	105	7.93	98.8	96.4	2.38	70	130
%SS2:	100	100	100	101	0.794	100	101	0.582	70	130
%SS3:	98.4	100	95.4	95.9	0.496	94.7	96.3	1.68	70	130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

$\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) * 2.$

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

**McCAMPBELL ANALYTICAL INC.**

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

0307253

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required:  Coelt  (Normal)  No Write On (DW)  No

Report To: Brian Stozek/Rod Freitag Bill To: Rod Freitag  
Company: PSI Alameda GSA  
4703 Tidewater Ave suite 6  
Oakland, CA 94601 E-Mail:  
Tele: (510) 434-9200 Fax: ( )  
Project #: OG-04H Project Name: Alco Park  
Project Location: Oakland  
Sampler Signature: *[Signature]*

**Analysis Request**

**Other** **Comments**

BTEX & TPH as Gas (602/8020 + 8015) M/TBE  
TPH as Diesel (8015)  
Total Petroleum Oil & Grease (5520 E&F/B&F)  
Total Petroleum Hydrocarbons (418.1)  
EPA 601 / 8010  
BTEX ONLY (EPA 603 / 8030)  
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 (7240742/7239.2/6010)  
RCI  
TPH-G / 8260 w/oxygenates

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other				
MW-1		7/15/03	11:45	4	Vod	X						X						
MW-6		↓	12:00	↓	↓	X						X						
MW-7		↓	12:00	↓	↓	X						X						

Relinquished By: Brian Stozek Date: 7/16/03 Time: 11:32  
Received By: *[Signature]* 29K  
Relinquished By: *[Signature]* Date: 7/16/03 Time: 12:42  
Received By: *[Signature]*  
Relinquished By: Date: Time: Received By:

ICE/IT   
GOOD CONDITION   
HEAD SPACE ABSENT   
DECHLORINATED IN LAB   
PRESERVATION APPROPRIATE   
CONTAINERS PRESERVED IN LAB   
VOAS  O&G  METALS  OTHER

**McC Campbell Analytical Inc.**



110 Second Avenue South, #D7  
 Pacheco, CA 94553-5560  
 (925) 798-1620

**CHAIN-OF-CUSTODY RECORD**

WorkOrder: 0307253

Client:

Professional Service Industries  
 4703 Tidewater Ave., Suite B  
 Oakland, CA 94601

TEL: (510) 434-9200  
 FAX:  
 ProjectNo: #OG041; Alco Park  
 PO:

Date Received: 7/16/03  
 Date Printed: 7/16/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests							
					<>	N8021B/8015C	SW8260B					
0307253-001	MW-1	Water	7/15/03 11:45:00 AM	<input type="checkbox"/>	A	A	B					
0307253-002	MW-6	Water	7/15/03 12:20:00 PM	<input type="checkbox"/>		A	B					
0307253-003	MW-7	Water	7/15/03 12:00:00 PM	<input type="checkbox"/>		A	B					

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.