

April 4, 2007

Mr. Rod Freitag, P.E.  
Environmental Program Manager  
County of Alameda  
Engineering & Environmental Management Department  
1401 Lakeside Drive, 11th Floor  
Oakland, CA 94612


RE: 2007 Annual Groundwater Monitoring Report  
Alcopark Fueling Facility, Oakland, California

Dear Mr. Freitag:

Professional Service Industries is pleased to transmit two copies of the 2007 Annual Groundwater Monitoring Report for the Alcopark Fueling Facility located at 165 13th Street, Oakland, California. Please call me with any comments or questions on this report at (510) 434-9200.

Sincerely,

Professional Service Industries, Inc.



Frank R. Poss  
Senior Hydrogeologist

**2007 ANNUAL  
GROUNDWATER MONITORING REPORT  
ALCOPARK FUELING FACILITY  
OAKLAND, CALIFORNIA**

**2007 ANNUAL  
GROUNDWATER MONITORING REPORT  
ALCOPARK FUELING FACILITY  
OAKLAND, CALIFORNIA**

Prepared for

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

Prepared by

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April 3, 2007  
575-4G009

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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.



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Frank R. Poss, REA  
Senior Hydrogeologist



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Brand Burfield, PG 6986  
Project Geologist



# 1. INTRODUCTION

Professional Service Industries, Inc. (PSI) was retained by the Alameda County General Services Agency (ACGSA) to perform the annual 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 program was initially 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 wells MW-1, MW-4 and MW-5 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 presenting our conclusions regarding the data generated.

## 1.2 SITE BACKGROUND

The ACGSA operates two 10,000-gallon Underground Storage Tanks (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 (benzene, toluene, ethyl-benzene, and xylenes) in the groundwater. Subsequent sample results indicated the presence of Total Petroleum Hydrocarbons as Gasoline (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. Methyl tert-Butyl ether (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 groundwater monitoring 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.

In accordance with the e-mailed authorization of Mr. Steven Plunkett of the ACHCSA, dated July 27, 2006, groundwater sampling is currently being conducted annually.

### **1.2.1 STORAGE TANK SYSTEM UPDATES**

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 February 8<sup>th</sup> and 15<sup>th</sup>, 2007. 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, on February 8, 2007, 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 were plotted on a groundwater elevation map (presented as Figure 2). The groundwater elevation data are presented in Table 1.

PSI's interpretation of the groundwater elevation data indicates the groundwater is flowing to the east under a hydraulic gradient of 0.006. 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. A copy of the Chain-of-Custody form is included in Appendix B.

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 another 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 environmental 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 methods indicated:

- Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260.
- Total Petroleum Hydrocarbons as Gasoline (TPH-G) by EPA Method 8015-M

Analysis for TPH-G was not originally performed on the samples, as it was inadvertently left off the laboratory test schedule. When the omission was discovered, PSI contacted the lab to schedule the analysis immediately. The TPH-G analysis on samples MW-6 and MW-7 was performed approximately one week outside of their hold time and TPH-G analysis on sample MW-1 was performed approximately two weeks outside of its hold time.

#### 3.1 ANALYTICAL RESULTS

PSI contacted Ms. Angela Rydelius, lab manager at McCampbell Analytical, regarding the possible effect of the missed holding time on the analytical results. Ms. Rydelius indicated that, since the un-opened containers used for the TPH-G analysis were both preserved and kept refrigerated, she would not expect there to be any significant difference in the TPH-G results due to the missed holding times.

TPH-G and VOCs, including MTBE, were detected in the samples from all three groundwater-monitoring wells sampled for this monitoring event.

- TPH-G was detected in wells MW-1 (100 micrograms per liter ( $\mu\text{g/l}$ )), MW-6 (6,800  $\mu\text{g/l}$ ) and MW-7 (70  $\mu\text{g/l}$ ).
- Benzene was detected in wells MW-1 (13  $\mu\text{g/l}$ ) and MW-6 (2,000  $\mu\text{g/l}$ ). Benzene concentrations increased in wells 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 (3.7  $\mu\text{g/l}$ ), MW-6 (340  $\mu\text{g/l}$ ) and MW-7 (87  $\mu\text{g/l}$ ). The MTBE concentrations decreased in wells MW-6 and MW-7 and increased slightly

in well MW-1 since the previous sampling event. Figure 4 depicts the MTBE concentration with time in MW-1, MW-6, and MW-7. In general, MTBE concentrations appear to be decreasing over time.

- 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.
  - Ethylbenzene at 130 µg/l in MW-6
  - Xylenes at 190 µg/l in MW-6
  - Tert-Amyl methyl ether (TAME) at 94 µg/l in MW-6
  - 1,2,4 Trimethylbenzene at 2.4 µg/l in MW-1
  - t-Butyl alcohol (TBA) at 16 µg/l in MW-1
  - 1,2 – Dichloroethane at 8.3 µg/l in MW-1

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

## 4. CONCLUSIONS AND RECOMMENDATIONS

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

- Groundwater elevations measured at the site range from approximately 14.93 to 15.15 feet above msl.
- Groundwater flow direction is to the east under a hydraulic gradient of 0.006, which is consistent with historic conditions.
- The groundwater samples collected from wells MW-1, MW-6 and MW-7 contained measurable concentrations of TPH-G and VOCs, with MTBE and benzene being the primary contaminants of concern.

Based on the groundwater sampling since 1989, the lack of sensitive receptors, and the stability of the plume, PSI has recommended that the site be considered for closure. PSI understands that closure proceedings have been initiated by the ACHCSA.

## **5. REFERENCES**

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

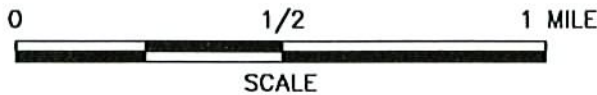
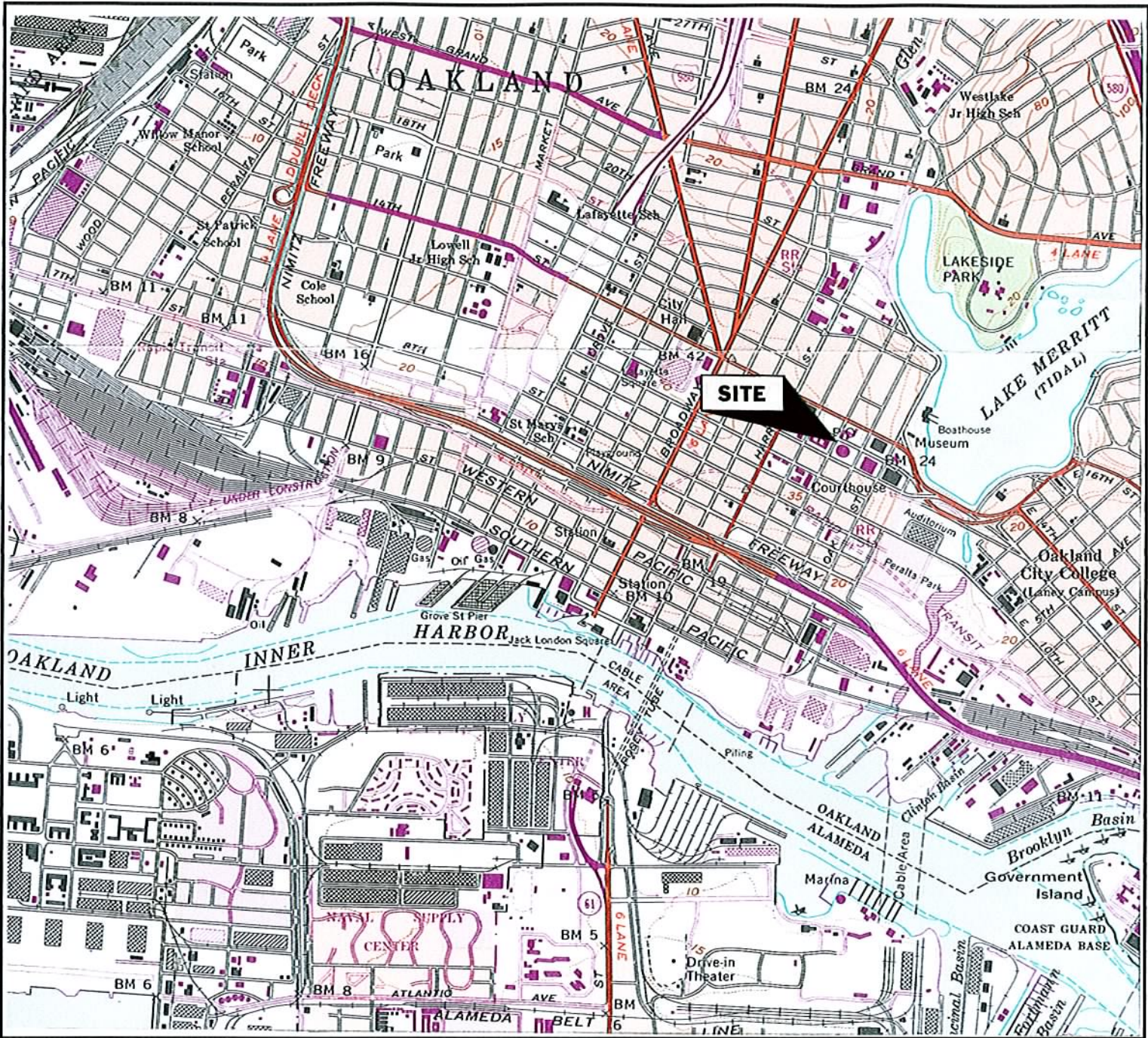
ACHCSA, 1997a, Workplan Request Letter to Mr. Rodman Freitag, September 11.

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

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

**FIGURES**





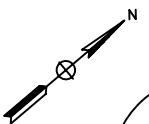
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 U.S.G.S. OAKLANDWEST, CALIFORNIA, 1959  
 PHOTOREVISED 1980



SITE LOCATION  
 ALCOPARK FUELING STATION  
 165 13TH STREET  
 OAKLAND, CALIFORNIA  
 PROJECT NUMBER: 575-4G009

DATE: 3/04	CKD BY: F.P.	FIGURE NO: 1
FILE NO: 4G009-1		DRAWN BY: B.S.



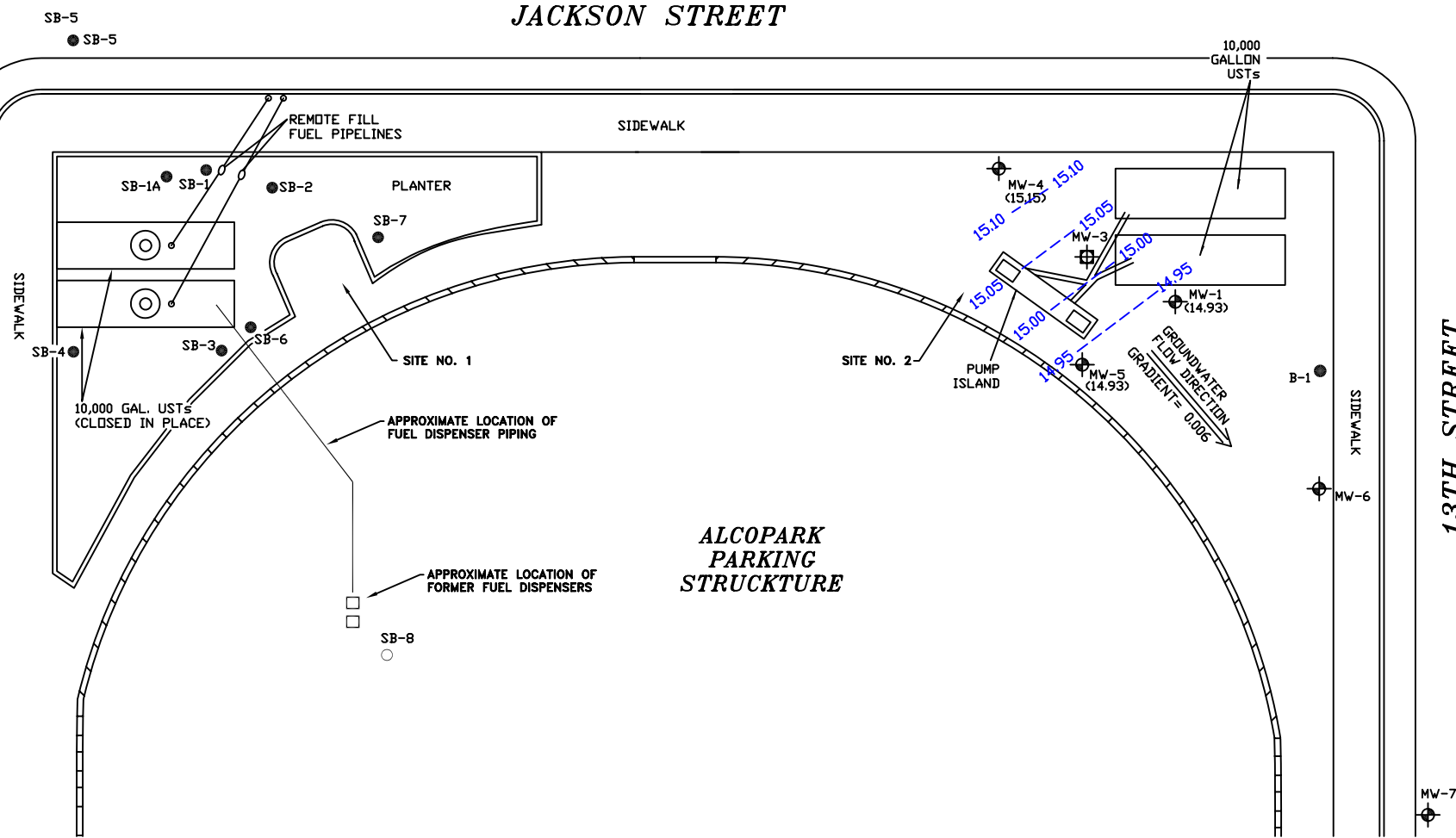


# JACKSON STREET

12TH STREET

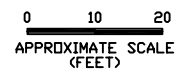
13TH STREET

## ALCOPARK PARKING STRUCTURE



### LEGEND:

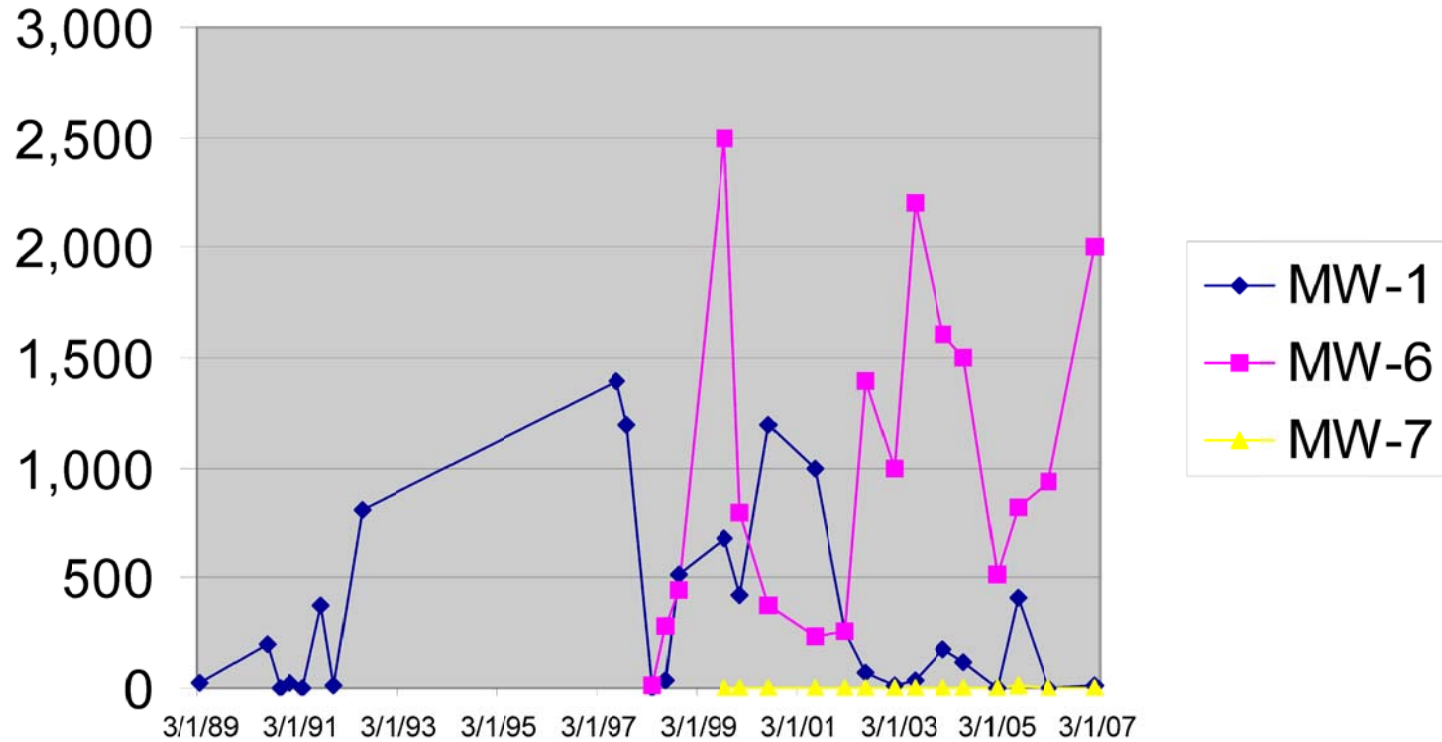
- MW-5 (14.93) - MONITORING WELL LOCATION WITH GROUNDWATER ELEVATION INDICATED IN FEET MSL
- 15.00 - GROUNDWATER CONTOUR (ELEVATION INDICATED IN FEET MSL)
- MW-3 - VADOSE MONITORING WELL LOCATION
- B-1 - SOIL BORING
- UNDERGROUND PIPING



GROUNDWATER ELEVATION MAP - 2/8/07  
ALCOPARK PARKING FACILITY  
INTERSECTION OF JACKSON AND 13TH STREETS  
OAKLAND, CALIFORNIA  
PROJECT NUMBER: 575-4G009

DATE: 4/07	CKD BY: F.P.	FIGURE NO.: 2
FILE NO.: 4G009-14		DRAWN BY: B.STOZEK

# Benzene Concentrations (ug/L)

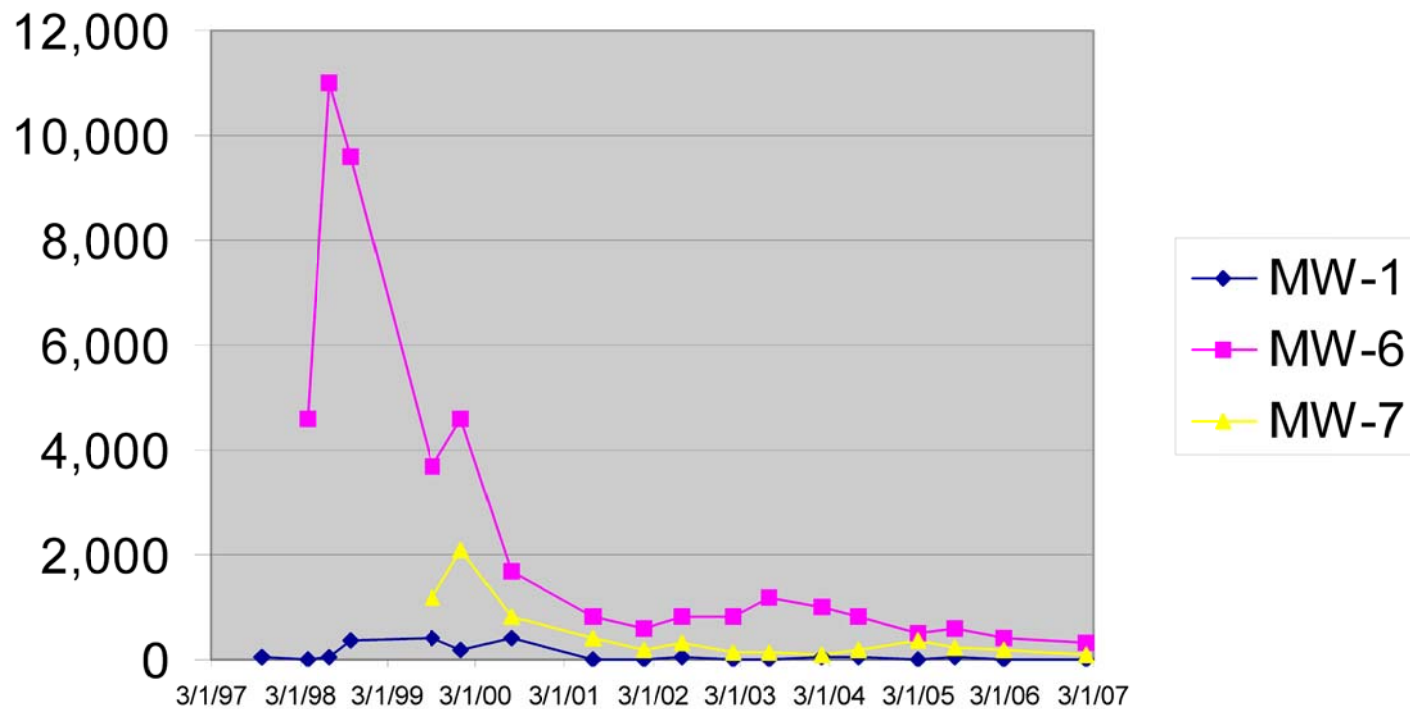


**PSI** ENVIRONMENTAL  
GEOTECHNICAL  
CONSULTING · ENGINEERING · TESTING

BENZENE VS. TIME  
ALCOPARK PARKING FACILITY  
INTERSECTION OF JACKSON AND 13TH STREETS  
OAKLAND, CALIFORNIA  
PROJECT NUMBER: 575-4G009

DATE: 4/07	CKD BY: F.P.	FIGURE NO.: 3
FILE NO.: 4G009-BEN		DRAWN BY: B. STOZEK

## MTBE Concentrations (ug/L)



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 CONSTRUCTION  
 CONSULTING · ENGINEERING · TESTING

MTBE VS. TIME  
 ALCOPARK PARKING FACILITY  
 INTERSECTION OF JACKSON AND 13TH STREETS  
 OAKLAND, CALIFORNIA  
 PROJECT NUMBER: 575-4G009

DATE: 4/07	CKD BY: F.P.	FIGURE NO.: 4
FILE NO.: 3G026-MTBE		DRAWN BY: B. STOZEK

**TABLE**

**TABLE 1  
GROUNDWATER ELEVATION AND ANALYTICAL DATA SUMMARY  
ALCOPARK FUELING FACILITY SITE NO. 2  
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
	7/26/1990	12.3	1,400	NA	200	45	ND	53
	10/25/1990	12.1	1,200	NA	ND	7.3	2.2	46
	1/25/1991	11.9	270	NA	23	1.5	ND	3.1
	4/25/1991	11.8	230	NA	ND	ND	ND	ND
	8/27/1991	11.8	8,300	NA	370	64	ND	120
	11/25/1991	11.7	810	NA	9.3	ND	7.8	32
	6/11/1992	12.85	2,600	NA	810	16	21	42
	7/16/1997	14.36	19,000	ND (150)	1,400	2,800	500	2,600
	10/21/1997	13.92	14,000	29	1,200	1,000	590	2,800
	3/11/1998	17.14	NS	NS	NS	NS	NS	NS
	4/1/1998	17.14	ND (50)	6.3	5.4	ND (0.5)	ND (0.5)	0.82
	7/15/1998	16.41	71	57	31	ND (0.5)	ND (0.5)	3.1
	10/22/1998	15.62	5,100	360	520	140	250	950
	9/9/1999	15.42	2,400	400	680	140	130	370
	1/18/2000	14.49	4,100	180	420	11	210	350
	5/4/2000	16.19	NS	NS	NS	NS	NS	NS
	8/22/2000	15.34	9,400	410	1,200	130	410	920
	2/8/2001	14.53	NS	NS	NS	NS	NS	NS
	7/20/2001	14.60	9,600	ND (50)	1,000	300	350	2,000
	2/18/2002	15.08	1,500	ND (100)	260	6.5	2.8	49
	7/19/2002	14.84	180	28	68	ND (1.7)	ND (1.7)	6.8
	2/10/2003	14.83	210	11	14	0.75	ND (0.5)	4.0
	7/15/2003	14.80	370	4.6	31	0.99	22	75
	2/12/2004	14.87	1,800	29	170	2.7	140	87
	7/7/2004	14.81	800	37	120	ND (2.5)	67	38
	3/24/2005	15.92	ND (50)	4.7	4	ND (0.5)	2.5	2
	8/17/2005	15.60	4,100	59	410	35	380	1,500
3/29/2006	16.97	NA	2.4	4.7	ND (0.5)	ND (0.5)	ND (0.5)	
2/8/2007	14.93	100	3.7	13	ND (0.5)	1.1	3.9	
MW-4	3/21/1989	12.4	ND	NA	13	1.4	1.0	ND
	7/26/1990	12.5	NA	NA	0.8	ND	ND	ND
	10/25/1990	12.2	NA	NA	120	1.2	1.1	0.9
	1/25/1991	12.0	NA	NA	230	2.8	1.2	2.0
	4/25/1991	13.0	170	NA	12	ND	ND	2.3
	8/27/1991	11.8	ND	NA	87	1.3	0.8	0.8
	11/25/1991	11.8	1,400	NA	ND	1.7	8.6	3.6
	6/11/1992	12.93	560	NA	150	1.8	1.8	1.1
	7/16/1997	14.46	50	ND	ND	ND	ND	ND
	10/21/1997	14.10	ND	ND	ND	ND	ND	ND
	3/11/1998	17.39	NS	NS	NS	NS	NS	NS
	4/1/1998	17.40	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	7/15/1998	16.92	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	10/22/1998	15.75	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	9/9/1999	15.57	NS	NS	NS	NS	NS	NS
	1/18/2000	14.32	NS	NS	NS	NS	NS	NS
	5/4/2000	16.34	NS	NS	NS	NS	NS	NS
	8/22/2000	15.47	NS	NS	NS	NS	NS	NS
	2/8/2001	14.73	NS	NS	NS	NS	NS	NS
	7/20/2001	14.72	NS	NS	NS	NS	NS	NS
	2/18/2002	15.05	NS	NS	NS	NS	NS	NS
	7/19/2002	14.97	NS	NS	NS	NS	NS	NS
	2/10/2003	14.94	NS	NS	NS	NS	NS	NS
	7/15/2003	14.94	NS	NS	NS	NS	NS	NS
	2/12/2004	14.93	NS	NS	NS	NS	NS	NS
	7/7/2004	14.94	NS	NS	NS	NS	NS	NS
	3/24/2005	16.05	NS	NS	NS	NS	NS	NS
	8/17/2005	15.82	NS	NS	NS	NS	NS	NS
3/29/2006	17.22	NS	NS	NS	NS	NS	NS	
2/8/2007	15.15	NS	NS	NS	NS	NS	NS	
MW-5	3/21/1989	12.2	ND	NA	ND	ND	ND	ND
	7/26/1990	12.4	670	NA	0.8	ND	ND	ND
	10/25/1990	12.1	120	NA	13	ND	ND	ND
	1/25/1991	11.9	120	NA	3.2	ND	ND	ND
	4/25/1991	12.3	ND	NA	ND	ND	ND	ND
	8/27/1991	11.5	ND	NA	20	ND	0.5	ND
	11/25/1991	11.7	190	NA	2.7	ND	0.8	2.5
	6/11/1992	12.85	150	NA	37	ND	ND	ND
	7/16/1997	14.33	ND	22	ND	ND	ND	ND

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

<i>All concentrations in ug/l (PPB).</i>								
Well	Date	Groundwater Elevation	TPH-G	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-5 (cont.)	10/21/1997	13.88	ND	14	ND	ND	ND	ND
	3/11/1998	17.14	NS	NS	NS	NS	NS	NS
	4/1/1998	17.14	ND (50)	11	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	7/15/1998	16.43	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	10/22/1998	15.60	ND (50)	ND (5.0)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	9/9/1999	15.44	NS	NS	NS	NS	NS	NS
	1/18/2000	14.67	NS	NS	NS	NS	NS	NS
	5/4/2000	16.18	NS	NS	NS	NS	NS	NS
	8/22/2000	15.32	NS	NS	NS	NS	NS	NS
	2/8/2001	14.53	NS	NS	NS	NS	NS	NS
	7/20/2001	14.59	NS	NS	NS	NS	NS	NS
	2/18/2002	14.94	NS	NS	NS	NS	NS	NS
	7/19/2002	14.83	NS	NS	NS	NS	NS	NS
	2/10/2003	14.83	NS	NS	NS	NS	NS	NS
	7/15/2003	14.80	NS	NS	NS	NS	NS	NS
	2/12/2004	14.87	NS	NS	NS	NS	NS	NS
	7/7/2004	14.82	NS	NS	NS	NS	NS	NS
	3/24/2005	15.91	NS	NS	NS	NS	NS	NS
	8/17/2005	15.59	NS	NS	NS	NS	NS	NS
	3/29/2006	16.97	NS	NS	NS	NS	NS	NS
2/8/2007	14.93	NS	NS	NS	NS	NS	NS	
MW-6	4/1/1998	NA	740	4,600	9.8	3.2	3.0	15
	7/15/1998	NA	6,200	11,000	280	43	180	350
	7/15/1998	NA	NA	13,000	ND (500)	ND (500)	ND (500)	ND (500)
	10/22/1998	NA	4,700	9,600	450	13	200	200
	10/22/1998	NA	NA	9,100	470	ND (250)	ND (250)	ND (250)
	9/9/1999	NA	6,600	3,700	2,500	43	310	250
	1/18/2000	NA	3,500	4,600	800	ND (5.0)	40	13
	5/4/2000	NA	NS	NS	NS	NS	NS	NS
	8/22/2000	NA	1,400	1,700	370	4.8	12	35
	2/8/2001	NA	NS	NS	NS	NS	NS	NS
	7/20/2001	NA	1,100	800	240	2.9	2.3	3.4
	2/18/2002	NA	1,500	570	260	ND (2.0)	11	4.3
	7/19/2002	NA	1,800	800	1,400	ND (50)	ND (50)	ND (50)
	2/10/2003	NA	4,000	830	1,000	ND (50)	ND (50)	ND (50)
	7/15/2003	NA	4,100	1,200	2,200	ND (25)	180	260
	2/12/2004	NA	7,200	980	1,600	ND (25)	100	440
	7/7/2004	NA	4,000	840	1,500	ND (25)	150	210
3/24/2005	NA	4,600	480	520	ND (10)	86	280	
8/17/2005	NA	2,800	610	820	ND (17)	190	250	
3/29/2006	NA	NA	410	940	ND (50)	85	140	
2/15/2007	NA	6,800	340	2,000	ND (50)	130	190	
MW-7	9/9/1999	NA	92	1,200	1.6	ND (0.5)	ND (0.5)	ND (0.5)
	1/18/2000	NA	ND	2,100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	5/4/2000	NA	140	1,100	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	8/22/2000	NA	160	830	0.62	ND (0.5)	ND (0.5)	ND (0.5)
	2/8/2001	NA	130	650	ND (0.5)	0.53	ND (0.5)	ND (0.5)
	7/20/2001	NA	56	400	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	2/18/2002	NA	ND (50)	200	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
	7/19/2002	NA	ND (50)	300	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
	2/10/2003	NA	ND (50)	140	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
	7/15/2003	NA	ND (50)	140	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)
	2/12/2004	NA	ND (50)	100	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)
	7/7/2004	NA	56	200	ND (2.5)	ND (2.5)	ND (2.5)	ND (2.5)
	3/24/2005	NA	ND (50)	350	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
	8/17/2005	NA	66	230	9	ND (5.0)	ND (5.0)	7
	3/29/2006	NA	NA	160	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
2/15/2007	NA	70	87	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	
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.



**APPENDIX A**

**GROUNDWATER SAMPLING FIELD PROCEDURES  
AND WATER ELEVATIONS**

## APPENDIX A

### GROUNDWATER SAMPLING

The following procedures will be used for groundwater sampling:

1. All non-dedicated equipment shall be washed prior to entering the well with an Alconox solution, followed by two deionized water rinses.
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-groundwater will be measured in wells containing free floating product using a Solinst oil-water interface probe to an accuracy of approximately 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. Groundwater samples will be delivered to a State-certified environmental laboratory within approximately 24 hours of collection.





**APPENDIX B**

**LABORATORY REPORT AND CHAIN OF CUSTODY**



## **McC Campbell Analytical, Inc.**

"When Quality Counts"

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Web: [www.mcccampbell.com](http://www.mcccampbell.com) E-mail: [main@mcccampbell.com](mailto:main@mcccampbell.com)  
Telephone: 877-252-9262 Fax: 925-252-9269

Professional Service Industries 4703 Tidewater Ave., Suite B Oakland, CA 94601	Client Project ID: #575-4G009	Date Sampled: 02/08/07-02/15/07
		Date Received: 02/21/07
	Client Contact: Frank Poss	Date Reported: 02/28/07
	Client P.O.:	Date Completed: 02/28/07

**WorkOrder: 0702465**

February 28, 2007

Dear Frank:

Enclosed are:

- 1). the results of **3** analyzed samples from your **#575-4G009 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.

Best regards,

Angela Rydelius, Lab Manager



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Telephone: 877-252-9262 Fax: 925-252-9269

Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #575-4G009	Date Sampled: 02/08/07
		Date Received: 02/21/07
	Client Contact: Frank Poss	Date Extracted: 02/22/07
	Client P.O.:	Date Analyzed: 02/22/07

## Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0702465

Lab ID	0702465-001A
Client ID	MW-1
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	10	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	1.7	1.0	0.5
Benzene	13	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	2.0	t-Butyl alcohol (TBA)	16	1.0	5.0
n-Butyl benzene	ND	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	1.0
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)	8.3	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	1.1	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	3.7	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	0.72	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	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	ND	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	2.4	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	3.9	1.0	0.5

### Surrogate Recoveries (%)

%SS1:	100	%SS2:	95
%SS3:	88		

### Comments:

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

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

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm





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Telephone: 877-252-9262 Fax: 925-252-9269

Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #575-4G009	Date Sampled: 02/15/07
		Date Received: 02/21/07
	Client Contact: Frank Poss	Date Extracted: 02/26/07
	Client P.O.:	Date Analyzed: 02/26/07

## Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0702465

Lab ID	0702465-002A
Client ID	MW-6
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<1000	100	10	Acrolein (Propenal)	ND<500	100	5.0
Acrylonitrile	ND<200	100	2.0	tert-Amyl methyl ether (TAME)	94	100	0.5
Benzene	2000	100	0.5	Bromobenzene	ND<50	100	0.5
Bromochloromethane	ND<50	100	0.5	Bromodichloromethane	ND<50	100	0.5
Bromoform	ND<50	100	0.5	Bromomethane	ND<50	100	0.5
2-Butanone (MEK)	ND<200	100	2.0	t-Butyl alcohol (TBA)	ND<500	100	5.0
n-Butyl benzene	ND<50	100	0.5	sec-Butyl benzene	ND<50	100	0.5
tert-Butyl benzene	ND<50	100	0.5	Carbon Disulfide	ND<50	100	0.5
Carbon Tetrachloride	ND<50	100	0.5	Chlorobenzene	ND<50	100	0.5
Chloroethane	ND<50	100	0.5	2-Chloroethyl Vinyl Ether	ND<100	100	1.0
Chloroform	ND<50	100	0.5	Chloromethane	ND<50	100	0.5
2-Chlorotoluene	ND<50	100	0.5	4-Chlorotoluene	ND<50	100	0.5
Dibromochloromethane	ND<50	100	0.5	1,2-Dibromo-3-chloropropane	ND<50	100	0.5
1,2-Dibromoethane (EDB)	ND<50	100	0.5	Dibromomethane	ND<50	100	0.5
1,2-Dichlorobenzene	ND<50	100	0.5	1,3-Dichlorobenzene	ND<50	100	0.5
1,4-Dichlorobenzene	ND<50	100	0.5	Dichlorodifluoromethane	ND<50	100	0.5
1,1-Dichloroethane	ND<50	100	0.5	1,2-Dichloroethane (1,2-DCA)	ND<50	100	0.5
1,1-Dichloroethene	ND<50	100	0.5	cis-1,2-Dichloroethene	ND<50	100	0.5
trans-1,2-Dichloroethene	ND<50	100	0.5	1,2-Dichloropropane	ND<50	100	0.5
1,3-Dichloropropane	ND<50	100	0.5	2,2-Dichloropropane	ND<50	100	0.5
1,1-Dichloropropene	ND<50	100	0.5	cis-1,3-Dichloropropene	ND<50	100	0.5
trans-1,3-Dichloropropene	ND<50	100	0.5	Diisopropyl ether (DIPE)	ND<50	100	0.5
Ethylbenzene	130	100	0.5	Ethyl tert-butyl ether (ETBE)	ND<50	100	0.5
Freon 113	ND<1000	100	10	Hexachlorobutadiene	ND<50	100	0.5
Hexachloroethane	ND<50	100	0.5	2-Hexanone	ND<50	100	0.5
Isopropylbenzene	ND<50	100	0.5	4-Isopropyl toluene	ND<50	100	0.5
Methyl-t-butyl ether (MTBE)	340	100	0.5	Methylene chloride	ND<50	100	0.5
4-Methyl-2-pentanone (MIBK)	ND<50	100	0.5	Naphthalene	ND<50	100	0.5
Nitrobenzene	ND<1000	100	10	n-Propyl benzene	ND<50	100	0.5
Styrene	ND<50	100	0.5	1,1,1,2-Tetrachloroethane	ND<50	100	0.5
1,1,2,2-Tetrachloroethane	ND<50	100	0.5	Tetrachloroethene	ND<50	100	0.5
Toluene	ND<50	100	0.5	1,2,3-Trichlorobenzene	ND<50	100	0.5
1,2,4-Trichlorobenzene	ND<50	100	0.5	1,1,1-Trichloroethane	ND<50	100	0.5
1,1,2-Trichloroethane	ND<50	100	0.5	Trichloroethene	ND<50	100	0.5
Trichlorofluoromethane	ND<50	100	0.5	1,2,3-Trichloropropane	ND<50	100	0.5
1,2,4-Trimethylbenzene	ND<50	100	0.5	1,3,5-Trimethylbenzene	ND<50	100	0.5
Vinyl Chloride	ND<50	100	0.5	Xylenes	190	100	0.5

### Surrogate Recoveries (%)

%SS1:	98	%SS2:	96
%SS3:	89		

### Comments:

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

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

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm



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Professional Service Industries  4703 Tidewater Ave., Suite B  Oakland, CA 94601	Client Project ID: #575-4G009	Date Sampled: 02/15/07
		Date Received: 02/21/07
	Client Contact: Frank Poss	Date Extracted: 02/26/07
	Client P.O.:	Date Analyzed: 02/26/07

## Volatile Organics by P&T and GC/MS (Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0702465

Lab ID	0702465-003A
Client ID	MW-7
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND<33	3.3	10	Acrolein (Propenal)	ND<17	3.3	5.0
Acrylonitrile	ND<6.7	3.3	2.0	tert-Amyl methyl ether (TAME)	22	3.3	0.5
Benzene	ND<1.7	3.3	0.5	Bromobenzene	ND<1.7	3.3	0.5
Bromochloromethane	ND<1.7	3.3	0.5	Bromodichloromethane	ND<1.7	3.3	0.5
Bromoform	ND<1.7	3.3	0.5	Bromomethane	ND<1.7	3.3	0.5
2-Butanone (MEK)	ND<6.7	3.3	2.0	t-Butyl alcohol (TBA)	ND<17	3.3	5.0
n-Butyl benzene	ND<1.7	3.3	0.5	sec-Butyl benzene	ND<1.7	3.3	0.5
tert-Butyl benzene	ND<1.7	3.3	0.5	Carbon Disulfide	23	3.3	0.5
Carbon Tetrachloride	ND<1.7	3.3	0.5	Chlorobenzene	ND<1.7	3.3	0.5
Chloroethane	ND<1.7	3.3	0.5	2-Chloroethyl Vinyl Ether	ND<3.3	3.3	1.0
Chloroform	ND<1.7	3.3	0.5	Chloromethane	ND<1.7	3.3	0.5
2-Chlorotoluene	ND<1.7	3.3	0.5	4-Chlorotoluene	ND<1.7	3.3	0.5
Dibromochloromethane	ND<1.7	3.3	0.5	1,2-Dibromo-3-chloropropane	ND<1.7	3.3	0.5
1,2-Dibromoethane (EDB)	ND<1.7	3.3	0.5	Dibromomethane	ND<1.7	3.3	0.5
1,2-Dichlorobenzene	ND<1.7	3.3	0.5	1,3-Dichlorobenzene	ND<1.7	3.3	0.5
1,4-Dichlorobenzene	ND<1.7	3.3	0.5	Dichlorodifluoromethane	ND<1.7	3.3	0.5
1,1-Dichloroethane	ND<1.7	3.3	0.5	1,2-Dichloroethane (1,2-DCA)	ND<1.7	3.3	0.5
1,1-Dichloroethene	ND<1.7	3.3	0.5	cis-1,2-Dichloroethene	ND<1.7	3.3	0.5
trans-1,2-Dichloroethene	ND<1.7	3.3	0.5	1,2-Dichloropropane	ND<1.7	3.3	0.5
1,3-Dichloropropane	ND<1.7	3.3	0.5	2,2-Dichloropropane	ND<1.7	3.3	0.5
1,1-Dichloropropene	ND<1.7	3.3	0.5	cis-1,3-Dichloropropene	ND<1.7	3.3	0.5
trans-1,3-Dichloropropene	ND<1.7	3.3	0.5	Diisopropyl ether (DIPE)	ND<1.7	3.3	0.5
Ethylbenzene	ND<1.7	3.3	0.5	Ethyl tert-butyl ether (ETBE)	ND<1.7	3.3	0.5
Freon 113	ND<33	3.3	10	Hexachlorobutadiene	ND<1.7	3.3	0.5
Hexachloroethane	ND<1.7	3.3	0.5	2-Hexanone	ND<1.7	3.3	0.5
Isopropylbenzene	ND<1.7	3.3	0.5	4-Isopropyl toluene	ND<1.7	3.3	0.5
Methyl-t-butyl ether (MTBE)	87	3.3	0.5	Methylene chloride	ND<1.7	3.3	0.5
4-Methyl-2-pentanone (MIBK)	ND<1.7	3.3	0.5	Naphthalene	ND<1.7	3.3	0.5
Nitrobenzene	ND<33	3.3	10	n-Propyl benzene	ND<1.7	3.3	0.5
Styrene	ND<1.7	3.3	0.5	1,1,1,2-Tetrachloroethane	ND<1.7	3.3	0.5
1,1,2,2-Tetrachloroethane	ND<1.7	3.3	0.5	Tetrachloroethene	ND<1.7	3.3	0.5
Toluene	ND<1.7	3.3	0.5	1,2,3-Trichlorobenzene	ND<1.7	3.3	0.5
1,2,4-Trichlorobenzene	ND<1.7	3.3	0.5	1,1,1-Trichloroethane	ND<1.7	3.3	0.5
1,1,2-Trichloroethane	ND<1.7	3.3	0.5	Trichloroethene	ND<1.7	3.3	0.5
Trichlorofluoromethane	ND<1.7	3.3	0.5	1,2,3-Trichloropropane	ND<1.7	3.3	0.5
1,2,4-Trimethylbenzene	ND<1.7	3.3	0.5	1,3,5-Trimethylbenzene	ND<1.7	3.3	0.5
Vinyl Chloride	ND<1.7	3.3	0.5	Xylenes	ND<1.7	3.3	0.5

### Surrogate Recoveries (%)

%SS1:	101	%SS2:	96
%SS3:	89		

Comments: i

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

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

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative; q) reported in ppm



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0702465

EPA Method SW8260B	Extraction SW5030B			BatchID: 26372					Spiked Sample ID: 0702455-015A			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	93.1	96.2	3.31	93.6	96.4	2.92	70 - 130	30	70 - 130	30
Benzene	ND	10	127	128	0.566	129	128	0.796	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	93.5	93.7	0.178	106	98.7	6.87	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	101	105	4.02	101	104	3.12	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	95.9	99.8	4.06	98.2	106	7.48	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	85.1	88	3.26	87.6	86	1.88	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	76.2	80.9	5.91	87.4	86.7	0.837	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	124	120	3.37	123	123	0	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	98.1	99.5	1.46	95.8	100	4.33	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	87.4	90.4	3.34	90.6	93.2	2.76	70 - 130	30	70 - 130	30
Toluene	ND	10	105	108	3.47	98	111	12.4	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	77.9	79.4	1.93	78.8	79.6	1.00	70 - 130	30	70 - 130	30
%SS1:	100	10	98	98	0	94	94	0	70 - 130	30	70 - 130	30
%SS2:	94	10	92	93	0.647	82	90	9.11	70 - 130	30	70 - 130	30
%SS3:	88	10	92	92	0	85	94	10.0	70 - 130	30	70 - 130	30

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

#### BATCH 26372 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0702465-001	2/08/07 2:25 PM	2/22/07	2/22/07 2:34 PM	0702465-002	2/15/07 12:50 PM	2/26/07	2/26/07 2:12 PM
0702465-003	2/15/07 12:30 PM	2/26/07	2/26/07 1:25 PM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the 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.

SunStar Laboratories, Inc.  
 3002 Dow Ave., Ste. 212  
 Tustin, CA 92780  
 714-505-4010

1538 WILLOW KATES RD  
 BAYC POINT, CA  
 (877) 798-1620

### Chain of Custody Record

Client: PSI (ALAMEDA CO. GSA - ATTN ROD FREITAS) Date: 2/20/07 Page: 1 Of 1  
 Address: 4703 TIDEWATER AVE, SUITE B, OAKLAND, CA 94601 Project Name: ALCO PARK  
 Phone: 510/434-9200 Fax: 510/434-7676 Collector: M. GARDNER Client Project #: 575-46009  
 Project Manager: FRANK POSS Batch #: \_\_\_\_\_ EDF #: T0600100049

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers
MW-1	2/8/07	14:25	WATER	40ml VOA	///	///										4
MW-6	2/15/07	12:50	↓	↓	///	///										4
MW-7	2/15/07	12:30	↓	↓	///	///										4
<p>ICE/# <u>3.6</u></p> <p>GOOD CONDITION _____</p> <p>HEAD SPACE ABSENT _____</p> <p>DICHLORINATED IN LAB _____</p> <p>PRESERVATION _____</p> <p>VOAS   O&amp;G   METALS   OTHER</p> <p>APPROPRIATE CONTAINERS PRESERVED IN LAB _____</p>																
Relinquished by: (signature) _____					Received by: (signature) _____					Total # of containers			Notes			
Date / Time <u>2/21/07 15:20</u>					Date / Time <u>2/21/07 15:20</u>					Chain of Custody seals Y/N/NA			<p>MW-1 TAKEN ON</p> <p>2-8-07 - HOLDING</p> <p>TOWE MAY SOON</p> <p>BE EXPIRED</p>			
Relinquished by: (signature) _____					Received by: (signature) _____					Seals intact? Y/N/NA						
Date / Time <u>2/21/07 4:45</u>					Date / Time _____					Received good condition/cold						
Relinquished by: (signature) _____					Received by: (signature) _____					Turn around time: <u>STD</u>						
Date / Time _____					Date / Time _____					(SEE NOTE) →						

Sample disposal Instructions: Disposal @ \$2.00 each \_\_\_\_\_ Return to client \_\_\_\_\_ Pickup \_\_\_\_\_

**McC Campbell Analytical, Inc.**



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 0702465**

**ClientID: PSIO**

EDF       Fax       Email       HardCopy       ThirdParty

<b>Report to:</b>		<b>Bill to</b>	<b>Requested TAT: 5 days</b>
Frank Poss	Email: frank.poss@psiusa.com	Accounts Payable	
Professional Service Industries	TEL: (510) 434-920 FAX: (510) 434-767	Professional Service Industries	<i>Date Received 02/21/2007</i>
4703 Tidewater Ave., Suite B	ProjectNo: #575-4G009	4703 Tidewater Ave., Suite B	<i>Date Printed: 02/28/2007</i>
Oakland, CA 94601	PO:	Oakland, CA 94601	

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0702465-001	MW-1	Water	2/8/07 2:25:00 PM	<input type="checkbox"/>	A												
0702465-002	MW-6	Water	2/15/07 12:50:00	<input type="checkbox"/>	A												
0702465-003	MW-7	Water	2/15/07 12:30:00	<input type="checkbox"/>	A												

**Test Legend:**

1	8260B_W	2		3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Sheli Cryderman**

**Comments:** MW-1 Taken on 2/8/07 - holding time may soon be expired

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.





**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Professional Service Industries 4703 Tidewater Ave., Suite B Oakland, CA 94601	Client Project ID: #575-4G009	Date Sampled: 02/08/07-02/15/07
		Date Received: 02/21/07
	Client Contact: Frank Poss	Date Reported: 02/28/07
	Client P.O.:	Date Completed: 03/13/07

**WorkOrder: 0702465**

March 13, 2007

Dear Frank:

Enclosed are:

- 1). the results of **3** analyzed samples from your **#575-4G009 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.

Best regards,

Angela Rydelius, Lab Manager





### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0702465

Analyte	EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 26663			Spiked Sample ID: 0703175-001A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	60	93.7	95.3	1.73	95.6	97	1.47	70 - 130	30	70 - 130	30
MTBE	73	10	NR	78.5	NR	105	114	8.24	70 - 130	30	70 - 130	30
Benzene	ND	10	107	99.1	7.34	98	102	4.13	70 - 130	30	70 - 130	30
Toluene	ND	10	98	92	6.28	90.9	94.7	4.11	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	107	103	3.81	102	105	3.11	70 - 130	30	70 - 130	30
Xylenes	ND	30	100	100	0	96.7	100	3.39	70 - 130	30	70 - 130	30
%SS:	97	10	100	96	3.88	94	94	0	70 - 130	30	70 - 130	30

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

#### BATCH 26663 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0702465-001	2/08/07 2:25 PM	3/09/07	3/09/07 3:31 AM	0702465-002	2/15/07 12:50 PM	3/09/07	3/09/07 3:01 AM
0702465-003	2/15/07 12:30 PM	3/09/07	3/09/07 11:36 PM				

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

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

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

McMURRAY ANALYTICAL

070 2465 PSIO

SunStar Laboratories, Inc. 1538 WILSON PASS RD  
3002 Dew Ave., Ste. 212 BAY POINT, CA  
Tustin, CA 92780 (877) 798-1620  
714-505-4010

Chain of Custody Record

Client: PSI (ALAMEDA CO. GSA - ATTN ROD FREITAS) Date: 2/20/07 Page: 1 Of 1  
Address: 4703 TIDEWATER AVE, SUITE B, OAKLAND, CA Project Name: ALCO PARK  
Phone: 510/434-9200 Fax: 510/434-7676 94601 Collector: M. GARDNER Client Project #: 575-46009  
Project Manager: FRANK POSS Batch #: \_\_\_\_\_ EDF #: T0600100049

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	Laboratory ID #	Comments/Preservative	Total # of containers							
MW-1	2/8/07	14:25	WATER	90ml VOA	/	/										2							
MW-6	2/15/07	12:50	↓	↓	/	/										4							
MW-7	2/19/07	12:30	↓	↓	/	/										4							
<div style="position: absolute; top: 50px; left: 50px; font-size: 2em; opacity: 0.5;">             +3              +              ✓           </div> <div style="position: absolute; top: 650px; left: 600px; border: 1px solid black; padding: 5px;">             ICE/P <u>3.6</u>              GOOD CONDITION _____              HEAD SPACE ABSENT _____              DECHLORINATED IN LAB _____              PRESERVATION _____              VOAS   C&amp;G   METALS   OTHER           </div>																							
																Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time	Total # of containers		Notes	
																<i>[Signature]</i>	2/21/07 15:20	<i>[Signature]</i>	2/21/07 5:20	Chain of Custody seals Y/N/NA		MW-1 TAKEN ON	
																<i>[Signature]</i>	2/21/07 4:45	<i>[Signature]</i>		Seals intact? Y/N/NA		2-8-07 - HOLDING	
																<i>[Signature]</i>		<i>[Signature]</i>		Received good condition/cold		TIME MAY SOON BE EXPIRED	

Sample disposal Instructions: Disposal @ \$2.00 each \_\_\_\_\_ Return to client \_\_\_\_\_ Pickup \_\_\_\_\_

Turn around time: STP

(SEE NOTE) →

**McC Campbell Analytical, Inc.**



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

**WorkOrder: 0702465**

**ClientID: PSIO**

EDF

Fax

Email

HardCopy

ThirdParty

**Report to:**

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

Email: frank.poss@psiusa.com  
 TEL: (510) 434-920 FAX: (510) 434-767  
 ProjectNo: #575-4G009  
 PO:

**Bill to**

Mr. Rod Freitag  
 Alameda County GSA-BMD  
 1401 Lakeside Drive, Ste. 1115  
 Oakland, CA 94612

**Requested TAT: 5 days**

**Date Received: 2/21/2007**

**Date Add-On: 3/07/2007**

**Date Printed: 3/08/2007**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0702465-001	MW-1	Water	02/08/07 2:25:00	<input type="checkbox"/>	B												
0702465-002	MW-6	Water	02/15/07 12:50:00	<input type="checkbox"/>	B												
0702465-003	MW-7	Water	02/15/07 12:30:00	<input type="checkbox"/>	B												

**Test Legend:**

1	G-MBTEX_W	2		3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Sheli Cryderman**

**Comments:** MW-1 Taken on 2/8/07 - holding time may soon be expired bill to alameda county per Brand 3/7. Gas added 3/7/07 per e-mail 5 day

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.