



# General Services Agency

Darlene A. Smith, Director

December 18, 1997

Mr. Tom Peacock  
Alameda County HCSA  
Environmental Health Services  
1131 Harbor Bay Pkwy., Ste. 250  
Alameda, California 94502-6577

**SUBJECT: GROUNDWATER MONITORING AT ALCOPARK**  
165 13TH STREET, OAKLAND, CALIFORNIA

Dear Mr. Peacock:

Enclosed for your records is a copy of the quarterly monitoring report, dated December 5, 1997, prepared by RAM Environmental. The analytical results for groundwater samples collected from MW-1, MW-4 and MW-5 are about the same as last quarter. Significant concentrations of TPHgas and BTEX are still present in MW-1.

The source of the contaminants at MW-1 is unknown. The two tanks at the site have been monitored using automatic tank gauging since 1992. In July of 1996, double-walled piping, dispenser sumps and leak sensors were installed. No significant contamination was detected during upgrade work, and no leaks have been detected by the monitoring system.

In your letter dated September 11, 1997, you requested that additional investigation be conducted to determine the downgradient extent and stability of the plume at Alcopark. GSA has just completed the bidding process for this work and will be awarding a contract shortly. The successful bidder will be submitting a workplan to you in January, 1998.

If you have any questions regarding this matter, I can be contacted at extension 29522.

Sincerely,

Rod Freitag, P.E.  
Environmental Program Manager

enclosure

cc: Jim de Vos, Deputy Director, GSA-TSD

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GROUNDWATER MONITORING REPORT  
ALCOPARK FUELING STATION  
165 13<sup>TH</sup> STREET  
OAKLAND, CA LIFORNIA 94612

Prepared For

Technical Services Department  
General Services Agency  
County Of Alameda  
Oakland, California  
(D. P. O. No. 141-3-0555-30)

Prepared by:

RAM Environmental  
7901 Oakport Street, Suite 4700  
Oakland, California 94621-2015

December 05, 1997

GROUNDWATER MONITORING REPORT  
ALCOPARK FUELING STATION  
165 13<sup>TH</sup> STREET  
OAKLAND, CA LIFORNIA 94612

Prepared For

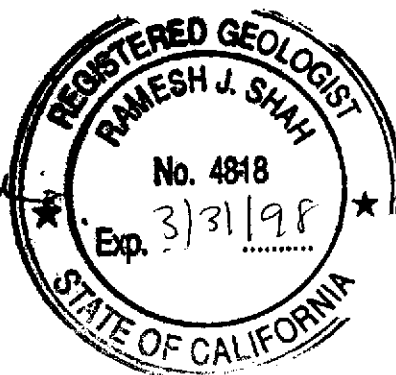
Technical Services Department  
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Oakland, California  
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RAM Environmental  
7901 Oakport Street, Suite 4700  
Oakland, California 94621-2015

*Ramesh J. Shah*

Ramesh J. Shah, R.G. (#4818)  
Sr. Hydrogeologist



Reviewed and Approved by:

\_\_\_\_\_  
Masood Ghassemi, Ph.D., P.E.(19696)  
Project Manager

December 05,1997

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## ABBREVIATIONS AND ACRONYMS

ACDEH	Alameda County Department of Environmental Health
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
bgs	Below Ground Surface (level)
CRWQCB	California Regional Water Quality Control Board (San Francisco Bay Region)
DOHS	(California) Department of Health Services (Now, Department of Toxic Substances Control)
Elev.	Elevation
EPA	(United States, Federal) Environmental Protection Agency
ft	Foot or Feet
gal	Gallon(s)
GSA	General Services Agency
ID	Inside Diameter
in.	Inch(es)
MAI	McCambell Analytical Inc.
MCL	Maximum Contaminant Level
mg/L	Milligram Per Liter (Approximately Parts Per Million, ppm)
ml	Milliliter
MPE	Measuring Point Elevation
MTBE	Methyl Tertiary Butyl Ether
MW	Monitoring Well
NA	Not Analyzed
ND	Not Detected
ppb	Parts Per Billion
ppm	Parts Per Million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
TPH	Total Petroleum Hydrocarbon
µg/L	Microgram Per Liter (Approximately, Parts Per Billion, ppb)

## 1.0 SUMMARY

Water level monitoring and groundwater sampling were performed on November 21, 1997 at three monitoring wells\* (MW-1, MW-4, and MW-5) at Alcopark Fueling Station, 165 13<sup>th</sup> Street, Oakland, California. No free product was noted in any of the wells. The groundwater depth ranged from 19.08 ft to 19.53 ft below the top of casing. Based on the data, groundwater flows in an easterly direction with a gradient of 0.005 ft/ft (approximately 25 feet per mile).

Well MW-1 had a sewer odor and had high concentrations of TPH (total petroleum hydrocarbon) gasoline and BTEX (benzene, toluene, ethylbenzene, and xylenes). Methyl tertiary butyl ether (MTBE) in MW-1 was detected at a concentration of 29 µg/L based on a reporting limit of 5 µg/L. Well MW-4 showed non-detect levels of TPH-gasoline, BTEX, and MTBE. Well MW-5 had non-detect levels of BTEX and TPH-gasoline, but a MTBE concentration of 14 µg/L.

## 2.0 INTRODUCTION

The County of Alameda operates a Fueling Station at 165 13<sup>th</sup> Street at the southeast corner of the intersection of Jackson Street and 13<sup>th</sup> Street in Oakland, California (Figure 1). Three groundwater monitoring wells were installed at the site in March 1989 to investigate soil and groundwater conditions subsequent to the repair of a line leak at one of the fuel dispensers (Figure 2). Initial sampling and analysis results indicated the presence of BTEX in the groundwater. Subsequent sampling and analysis results indicated that petroleum hydrocarbons were also present. The data suggested that tanks located upgradient of the site may be the source of the contamination. Accordingly, per a December 23, 1993 agreement between GSA (General Services Agency) and the Alameda County Department of Environmental Health (ACDEH), groundwater sampling was halted pending removal and investigation of the upgradient tanks.

On May 20, 1997, ACDEH sent GSA a letter indicating that the upgradient tanks had been removed and the site had been investigated. Based on its findings, ACDEH closed the upgradient site and requested that GSA resume groundwater monitoring at Alcopark. On June 25, 1997 RAM Environmental was

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\* MW-2 and MW-3 are a soil boring and a vadose zone monitoring well, respectively.

contracted to perform groundwater monitoring and sample collection and submit quarterly reports.

The first quarterly well sampling and groundwater monitoring under this contract was performed on July 16, 1997. Based on field observations and the analytical results, the following were noted:

- Well MW-1 had sewer odor and contained TPH-gasoline and BTEX. MTBE was non-detect, based on a reporting limit of 150 µg/L for a diluted sample. (Note: the sample had been diluted to reduce matrix interference).
- Well MW-4 had non-detect levels of BTEX, TPH-gasoline, and MTBE.
- Well MW-5 had non-detect levels of BTEX and TPH-gasoline, but had a MTBE concentration of 22 µg/L.

Upon review of the July 1997 report, ACDEH indicated a concern about the detection of MTBE in groundwater samples and suggested one more round of quarterly sampling and analysis to confirm the presence and concentration of MTBE. ACDEH also suggested not purging the wells prior to sampling, based on reported evidence that purging, while costly, does not give better information.

This report presents the results of the additional round of quarterly sampling and monitoring, performed on November 21, 1997. MTBE analysis of groundwater sample from well MW-1 was performed using EPA Method 8260 Modified (GS/MS), with a reporting limit of 5 µg/L. Figures 1 and 2 show the site location and the locations of monitoring wells, respectively.

### **3.0 WATER LEVEL MEASUREMENT AND RESULTS**

Depths to groundwater were measured in all three monitoring wells on November 21, 1997. Water levels were measured in an expeditious manner prior to sampling. Measurements were made to the nearest 0.01 ft from a surveyed point on the top of the well casing. A Solinst electric water indicator (manufactured by Solinst Canada Ltd., Glen Williams, Ontario, Canada) was used to measure depths to groundwater.

No free product was observed in any of the wells.

Using the measuring point elevations for the wells, the groundwater depth values were converted to water table elevations with reference to the local datum. Table 1 presents the date and time of water level

measurements, the measuring point elevation, the measured depth to groundwater, and the calculated water table elevations with reference to local datum at top of casing of MW-1 (i.e., 33.00 ft.)

**TABLE 1**  
**GROUNDWATER LEVEL DATA**  
**(NOVEMBER 21, 1997)**

Field Investigator: R. Shah

Well Number	Date	Time	Measuring Point Elevation (ft, Local Datum Elevation*)	Depth to Water (ft)	Elevation of Water Table (ft)
MW-1	11/21/97	7:07	33.00	19.08	13.92
MW-4	11/21/97	7:05	33.63	19.53	14.10
MW-5	11/21/97	7:06	33.01	19.13	13.88

\* Datum elevation: MW-1 Reference Point assigned elevation of 33.00 ft

Figure 3 shows the groundwater table contour and estimated flow direction, based on the November 21, 1997 measured levels. The groundwater depth ranged from 19.08 feet to 19.53 feet from top of casing. Water elevation to local datum was calculated by subtracting water depth from reference point elevation. Based on the elevation data, groundwater flows in an easterly direction with a gradient of 0.005 ft/ft (approximately 25 ft per mile).

#### 4.0 GROUNDWATER SAMPLING AND FIELD OBSERVATIONS

This section discusses the sample collection procedure and Chain of Custody documentation used.

Water samples from monitoring well MW-1 had a strong sewer odor and were black in color.

Samples for laboratory analysis were obtained using 2-in. diameter, new, disposable Voss bailers equipped with a removable bottom spout. Water samples for volatile organic compounds were collected in four 40-ml (milliliter) amber glass vials, capped with zero head space. All sample vials were inverted and tapped to verify that no air bubbles were present.

All samples were labeled and placed in an ice chest with blue-ice. They were sent, on the same day, via courier service and under proper chain-of-custody, to McCambell Analytical. Inc.(MAI) in Pacheco,



California, for analysis. MAI is the Alameda County contract laboratory and is State of California-certified laboratory for chemical analyses. All samples were analyzed for the TPH-gasoline, MTBE, and BTEX by EPA Method 8020. The water sample for well MW-1 was also analyzed for MTBE by GC/MS using EPA Method 8260 Modified to obtain the lowest possible reporting limit of 5 µg/L MTBE.

## 5.0 ANALYTICAL RESULTS

Table 2 presents a summary of the laboratory analytical results for the November 21, 1997 samples. The Certificate of Analysis, QA/QC data, and Chain-of-Custody are presented in Appendix A.

Based on the data in Table 2 and the field observations noted above, the following observations are of significance:

- Well MW-1 had a sewer odor and contained high levels of TPH-gasoline (14,000 µg/L) and BTEX (5,590 µg/L). Benzene at 1,200 µg/L and xylenes at 2,800 µg/L are above drinking water standards of 1 µg/L for benzene and 1,750 µg/L for xylenes promulgated by Federal EPA as Primary Drinking Water Standards (Maximum Contaminant Level, MCL). Toluene at 1,000 µg/L is above the State Action Level (AL) of 100 µg/L.
- Testing by EPA Method 8020, which required sample dilution to reduce matrix interference, yielded a non-detect level of MTBE at a reporting limit of 390 µg/L for water sample from Well MW-1. However, MTBE was quantified at 29 µg/L when the sample was analyzed by GC/MS per EPA Method 8260 Modified with reporting limit of 5 µg/L.
- Well MW-4 had non-detect levels of BTEX, TPH-gasoline, and MTBE.
- Well MW-5 had non-detect levels of BTEX and TPH-gasoline, but had a MTBE concentration of 14 µg/L using EPA Method 8020.

Table 3 compares the analytical results for the November 1997 samples with those obtained during 1989-1992 and July 1997. The data show significantly higher levels of contaminants in well MW-1 at the time of sampling in July and November 1997 than previously measured. There does not appear to be a significant change in contaminant levels for other two wells. The Alameda County GSA is in the process of securing services of a contractor to investigate to the source of contamination in Well MW-1.

**TABLE 2**  
**ANALYTICAL RESULTS**  
**COUNTY OF ALAMEDA, ALCOPARK FUELING STATION**  
**OAKLAND, CALIFORNIA**  
**NOVEMBER 21, 1997**

Method EPA 8020, Unit µg/L

Reporting Limit, Well No., and AL or MCL	TPH - gasoline	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
Reporting Limit	50	390 (5.0**)	0.5	0.5	0.5	0.5
MW-1*	14,000	ND<390 29 **	1,200	1,000	590	2,800
MW-4	ND	ND	ND	ND	ND	ND
MW-5	ND	14	ND	ND	ND	ND
AL or MCL		<b>180 PRG</b>	1 MCL	100 AL	680 MCL	1,750 MCL

Notes:

- \* Sample diluted due to high concentrations
- \*\* Sample was analyzed by EPA Method 8260 modified (GC/MS) with reporting limit of 5 µg/L
- AL = California State Action Level
- MCL = (Federal) Maximum Contaminant Levels
- ND = Not detected at reporting limit
- TPH = Total Petroleum Hydrocarbon
- µg/L = Microgram per liter (approximately equal to parts per billion, ppb)

TABLE 3

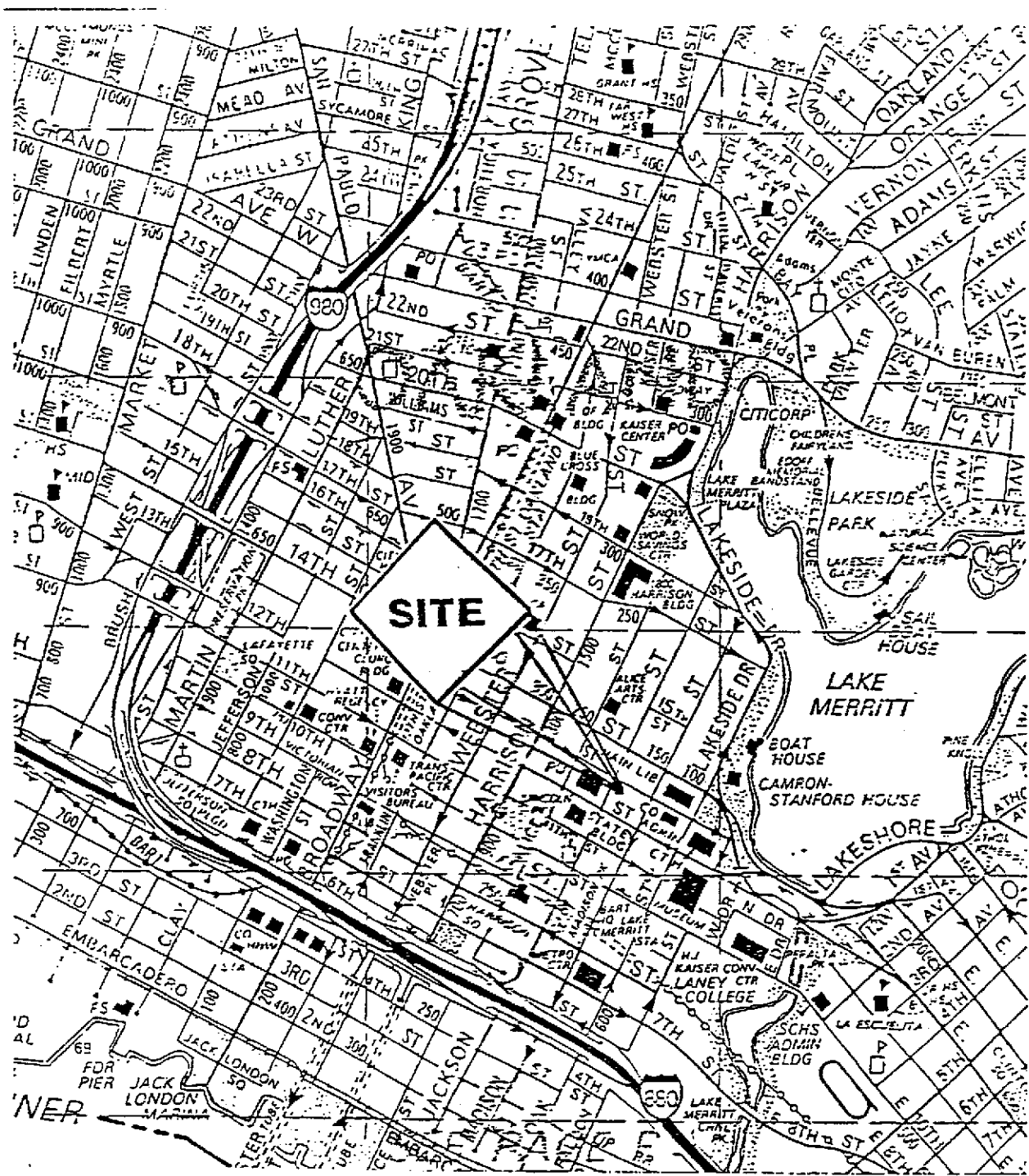
**WATER QUALITY TREND  
COUNTY OF ALAMEDA, ALCOPARK FUELING STATION  
OAKLAND, CALIFORNIA  
MARCH 1989 TO JUNE 1992, JULY 1997, AND NOVEMBER, 1997**

Units: µg/L

Well Number	Date (Month/Year)	Ground Water Elevation* (Ft.)	TPH-gasoline	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-1	3/89	12.2	ND	NA	21	3.9	0.4	4.5
	7/90	12.3	1,400	NA	200	45	ND	53
	10/90	12.1	1,200	NA	ND	7.3	2.2	46
	1/91	11.9	270	NA	23	1.5	ND	3.1
	4/91	11.8	230	NA	ND	ND	ND	ND
	8/91	11.8	8,300	NA	370	64	ND	120
	11/91	11.7	810	NA	9.3	ND	7.8	32
	6/92	12.85	2,600	NA	810	16	21	42
	7/97	14.36	19,000	ND<150	1,400	2,800	500	2,600
	11/97	13.92	14,000	ND<390	1,200	1,000	590	2,800
				29**				
MW-4	3/89	12.4	ND	NA	13	1.4	1.0	ND
	7/90	12.5	NA	NA	0.8	ND	ND	ND
	10/90	12.2	NA	NA	120	1.2	1.1	0.9
	1/91	12.0	NA	NA	230	2.8	1.2	2.0
	4/91	13.0	170	NA	12	ND	ND	2.3
	8/91	11.8	ND	NA	87	1.3	0.8	0.8
	11/91	11.8	1,400	NA	ND	1.7	8.6	3.6
	6/92	12.93	560	NA	150	1.8	1.8	1.1
	7/97	14.46	50	ND	ND	ND	ND	ND
	11/97	14.10	ND	ND	ND	ND	ND	ND
MW-5	3/89	12.2	ND	NA	ND	ND	ND	ND
	7/90	12.4	670	NA	0.8	ND	ND	ND
	10/90	12.1	120	NA	13	ND	ND	ND
	1/91	11.9	120	NA	3.2	ND	ND	ND
	4/91	12.3	ND	NA	ND	ND	ND	ND
	8/91	11.5	ND	NA	20	ND	0.5	ND
	11/91	11.7	190	NA	2.7	ND	0.8	2.5
	6/92	12.85	150	NA	37	ND	ND	ND
	7/97	14.33	ND	22	ND	ND	ND	ND
	11/97	13.88	ND	14	ND	ND	ND	ND

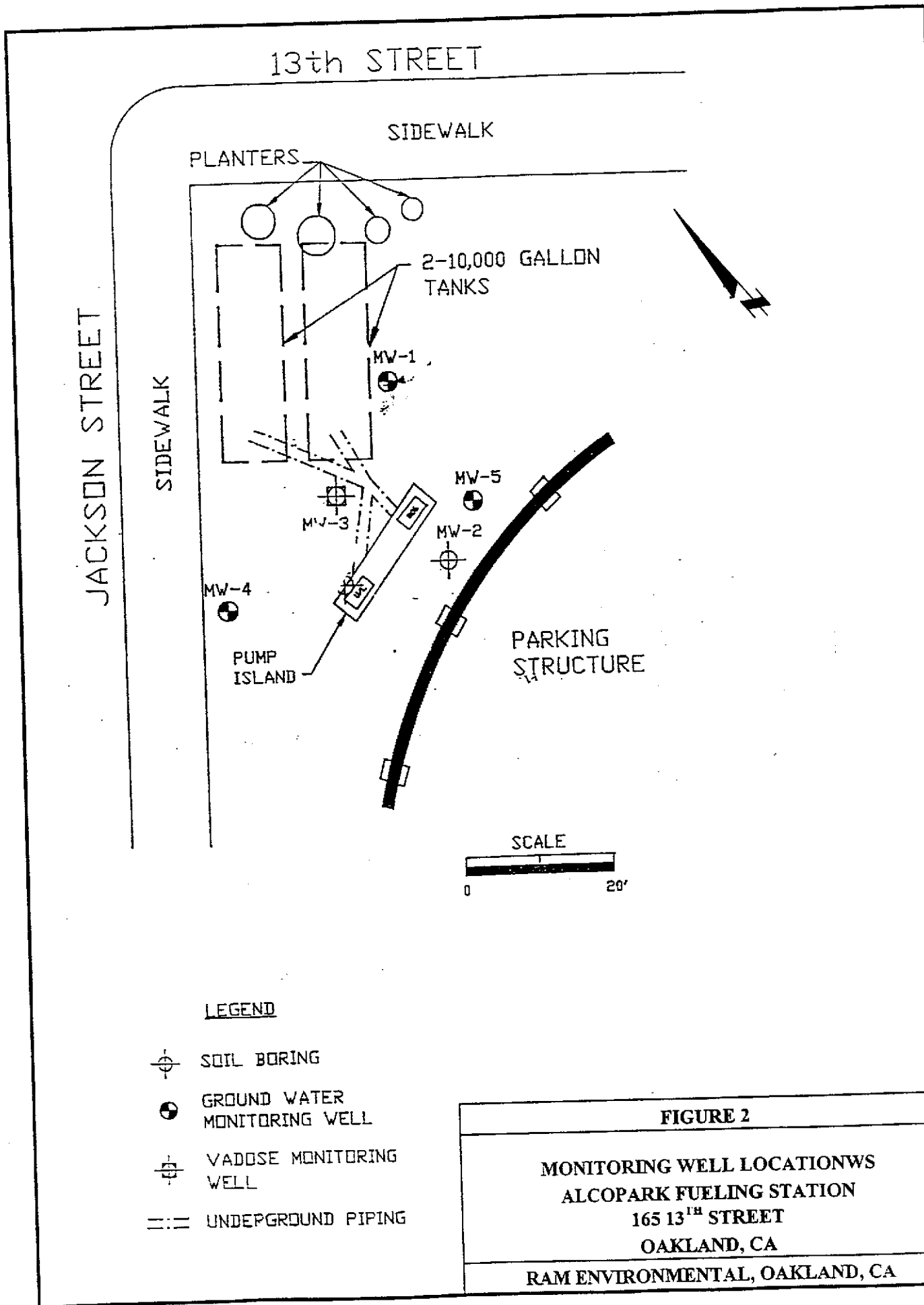
Notes:

- \* Ground Water Elevation: MW-1 Reference Point assigned elevation of 33.00 feet
- \*\* Sample was analyzed by EPA Method 8260 modified (GC/MS) with reporting limit of 5 µg/L
- MCL = (Federal) Maximum Contaminant Levels
- NA= Not Analyzed
- ND = Not detected at reporting limit



Not To Scale

<p><b>FIGURE 1</b></p> <p><b>SITE LOCATION MAP</b></p> <p><b>ALCOPARK FUELING STATION</b></p> <p><b>165 13<sup>TH</sup> STREET</b></p> <p><b>OAKLAND, CA</b></p> <p><b>RAM ENVIRONMENTAL, OAKLAND, CA</b></p>
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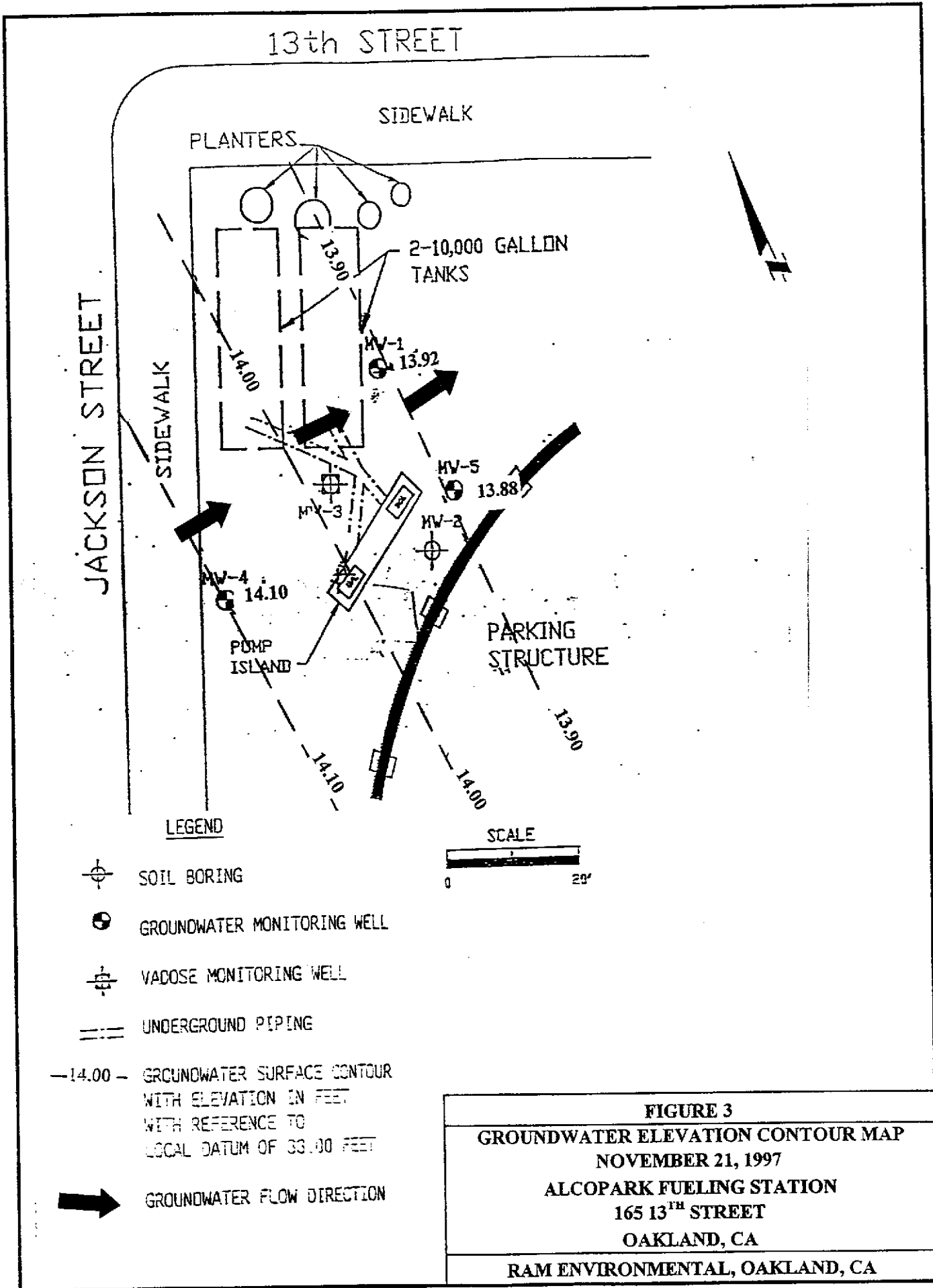
**LEGEND**

- ⊕ SOIL BORING
- GROUND WATER MONITORING WELL
- ⊕ VADOSE MONITORING WELL
- UNDERGROUND PIPING

**FIGURE 2**

**MONITORING WELL LOCATIONS  
ALCOPARK FUELING STATION  
165 13<sup>TH</sup> STREET  
OAKLAND, CA**

**RAM ENVIRONMENTAL, OAKLAND, CA**



JACKSON STREET

13th STREET

SIDEWALK

PLANTERS





2-10,000 GALLON TANKS

SIDEWALK


PARKING STRUCTURE

LEGEND

SCALE

-  SOIL BORING
-  GROUNDWATER MONITORING WELL
-  VADOSE MONITORING WELL
-  UNDERGROUND PIPING

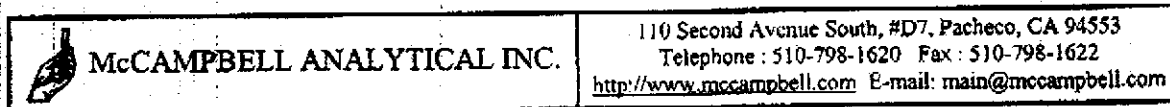
-14.00- GROUNDWATER SURFACE CONTOUR WITH ELEVATION IN FEET WITH REFERENCE TO LOCAL DATUM OF 33.00 FEET

 GROUNDWATER FLOW DIRECTION

**FIGURE 3**  
**GROUNDWATER ELEVATION CONTOUR MAP**  
 NOVEMBER 21, 1997  
 ALCOPARK FUELING STATION  
 165 13<sup>TH</sup> STREET  
 OAKLAND, CA  
 RAM ENVIRONMENTAL, OAKLAND, CA

**APPENDIX A**

**CERTIFICATE OF ANALYSIS  
WITH QA/QC DATA  
AND  
CHAIN-OF-CUSTODY**



Ram Environmental 7901 Oakport Street, #4700 Oakland, CA 94621	Client Project ID: #203; Alco Park, Oakland	Date Sampled: 11/21/97
		Date Received: 11/21/97
	Client Contact: Ramesh Shah	Date Extracted: 11/21/97
	Client P.O:	Date Analyzed: 11/21/97

12/01/97

Dear Ramesh:

Enclosed are:


- 1). the results of 3 samples from your #203; Alco Park, Oakland project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

Yours truly,

Edward Hamilton, Lab Director



 <b>McCAMPBELL ANALYTICAL INC.</b>	110 Second Avenue South, #D7, Pacheco, CA 94553 Telephone: 510-798-1620 Fax: 510-798-1622 <a href="http://www.mccampbell.com">http://www.mccampbell.com</a> E-mail: <a href="mailto:main@mccampbell.com">main@mccampbell.com</a>
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Ram Environmental 7901 Oakport Street, #4700 Oakland, CA 94621	Client Project ID: #203; Alco Park. Oakland	Date Sampled: 11/21/97
	Client Contact: Ramesh Shah	Date Received: 11/21/97
	Client P.O:	Date Extracted: 11/21/97
		Date Analyzed: 11/21/97


**Methyl tert-Butyl Ether \***

EPA method 8260 modified

Lab ID	Client ID	Matrix	MTBE*	% Recovery Surrogate
83271	MW-1-11/97	W	29	99
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	5.0 ug/L	
		S	50 ug/kg	

\* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L  
 h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644 EH Edward Hamilton, Lab Director

 <b>McCAMPBELL ANALYTICAL INC.</b>	110 Second Avenue South, #D7, Pacheco, CA 94553 Telephone: 510-798-1620 Fax: 510-798-1622 <a href="http://www.mccampbell.com">http://www.mccampbell.com</a> E-mail: <a href="mailto:main@mccampbell.com">main@mccampbell.com</a>
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Ram Environmental 7901 Oakport Street, #4700 Oakland, CA 94621	Client Project ID: #203; Alco Park, Oakland	Date Sampled: 11/21/97
	Client Contact: Ramesh Shah	Date Received: 11/21/97
	Client P.O:	Date Extracted: 11/21/97
		Date Analyzed: 11/21/97

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

Lab ID	Client ID	Matrix	TPH(g)*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
83271	MW-1-11/97	W	14,000,a	ND<390	1200	1000	590	2800	101
83272	MW-4-11/97	W	ND	ND	ND	ND	ND	ND	97
83273	MW-5-11/97	W	ND	14	ND	ND	ND	ND	96
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

\* cluttered chromatogram; sample peak coelutes with surrogate peak

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

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 11/21/97

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#83185)	MS	MSD		MS	MSD	
TPH (gas)	0.0	98.6	98.5	100.0	98.6	98.5	0.1
Benzene	0.0	10.5	10.5	10.0	105.0	105.0	0.0
Toluene	0.0	10.6	10.7	10.0	106.0	107.0	0.9
Ethyl Benzene	0.0	10.7	10.7	10.0	107.0	107.0	0.0
Xylenes	0.0	32.3	32.5	30.0	107.7	108.3	0.6
TPH (diesel)	0	144	151	150	96	101	4.7
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 11/24/97

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		
	Sample (#83110)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	98.7	94.6	100.0	98.7	94.6	4.2
Benzene	0.0	10.4	10.0	10.0	104.0	100.0	3.9
Toluene	0.0	10.5	10.2	10.0	105.0	102.0	2.9
Ethyl Benzene	0.0	10.6	10.2	10.0	106.0	102.0	3.8
Xylenes	0.0	31.9	31.0	30.0	106.3	103.3	2.9
TPH(diesel)	0	154	153	150	103	102	0.8
TRPH (oil & grease)	0	28400	25500	27300	104	93	10.8

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

9940XRAM3

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7

PACHECO, CA 94553

(510) 798-1820

FAX (510) 798-1822

CHAIN OF CUSTODY RECORD

TURN AROUND TIME:

RUSH  24 HOUR  48 HOUR  5 DAY

REPORT TO: RAMESH SHAH BILL TO: GSA, ROD FREITAG

COMPANY: RAM ENVIRONMENTAL

7901 OAKPORT ST, # 4700

OAKLAND

TELE: (510) 553-2143 FAX #: (510) 553-2145

PROJECT NUMBER: 203 PROJECT NAME: ALCO PARK, OAKLAND

PROJECT LOCATION: 165-13th ST Oakland SAMPLER SIGNATURE: Ramesh Shah

ANALYSIS REQUEST

OTHER

BTEX & TPH as Gasoline (802/8020 & 8015)	THP as Diesel (8015)	Total Petroleum Di & Grease (5520 ERF/5520 B47)	Total Petroleum Hydrocarbons (18.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080 - PCBs Dth	EPA 624/8240/8260	EPA 625/8270	CAH - 17 Metals	EPA - Priority Pollutant Metals	LEAD (7240/7421/239.2/6010)	ORGANIC LEAD	PCI	MTBE	MTBE B-1 8260 11/24
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COMMENTS

83271  
83272  
83273

SAMPLE ID	LOCATION	SAMPLING		# CONTAINERS	TYPE CONTAINERS	MATRIX				METHOD PRESERVED						
		DATE	TIME			WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	OTHER			
MW-1-1197		11/21/97	8:02	4	40ml	X					X				X	
MW-4-1197		11/21/97	7:24	4	Mi	X					X				X	
MW-5-1197		11/21/97	7:49	4	Mi	X					X				X	

VOAS | O&G | METALS | OTHER

ICE/CAP  PRESERVATION   
 GOOD CONDITION  APPROPRIATE CONTAINERS   
 HEAD SPACE ABSENT

RELINQUISHED BY: Ramesh Shah	DATE: 11/21/97	TIME: 9:59	RECEIVED BY: James D McLean
RELINQUISHED BY: James D McLean	DATE: 11-21-97	TIME: 1155	RECEIVED BY: Mike Pica
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY LABORATORY:

REMARKS: Lowest possible RL for MTBE. If necessary, analyze by EPA METHOD 8260.