



ENVIRONMENTAL  
PROTECTION

96 MAY 24 PM 12 26

**QUARTERLY  
GROUNDWATER  
MONITORING REPORT**

May 20, 1996

**Peralta Maintenance Yard  
501 5th Avenue  
Oakland, California**

**Prepared For:  
Mr. Robert Mibach  
Peralta Community College District**

**ACC Project No. 6045-14**

**OAKLAND ▪ SACRAMENTO  
SEATTLE ▪ LOS ANGELES**

**QUARTERLY GROUNDWATER MONITORING REPORT**

**Peralta Community College District Maintenance Yard  
501 5th Avenue  
Oakland, California, 94606**

*ACC Project No. 6045-14*

Prepared for:

Mr. Robert Mibach  
Peralta Community College District  
333 East 8th Street  
Oakland, California

May 20, 1996

Prepared by:

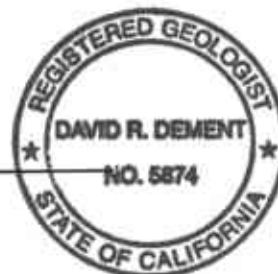


Misty C. Kaltreider  
Project Geologist

Reviewed by:



David R. DeMent, RG  
Senior Geologist



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**QUARTERLY GROUNDWATER MONITORING REPORT**  
**Peralta Community College District Maintenance Yard**  
**501 5th Avenue**  
**Oakland, California**

## **1.0 INTRODUCTION**

This report presents the procedures and findings of quarterly groundwater investigation conducted by ACC Environmental Consultants, Inc., (ACC) on behalf of the Peralta Community College District (District), site owner at 501 5th Avenue, Oakland, California. The project objective, as described in the Work Plan prepared on April 27, 1993, was to evaluate the extent of groundwater impact from the previous underground storage of petroleum products and to evaluate effectiveness of remedial actions conducted in the summer of 1995 using analysis of groundwater samples collected from three onsite monitoring wells.

## **2.0 BACKGROUND**

**Five underground storage tanks (USTs)** were installed before the 1960s. The tanks were used for storage of fuel and waste oil for the **City of Oakland Corporation Yard**. The tanks consisted of two 6,000-gallon gasoline tanks, one 2,000-gallon diesel tank, one 2,000-gallon ethyl (premium) gasoline tank, and one 550-gallon waste-oil tank. In 1980, the District acquired the property. The District abandoned the five USTs by filling them with water and installed three new fiberglass USTs. The new tanks consisted of two 6,000-gallon and one 4,000-gallon fiberglass tanks to store gasoline fuel. The new tanks were installed approximately 150 feet from the original tanks.

### **2.1 UST Removal**

In 1992, the **five original USTs were removed**. During removal, one grab groundwater sample and eight soil samples were collected from the excavation. Laboratory analysis of the soil samples indicated concentrations up to 228 parts per million (ppm) total petroleum hydrocarbons as diesel (TPHd), 134 ppm total petroleum hydrocarbons as gasoline (TPHg), 2,407 parts per billion (ppb) benzene, 4,617 ppb toluene, 7,170 ppb ethylbenzene, 6,147 ppb total xylenes, and 5,477 ppm oil and grease. Laboratory analysis of the water samples collected from the excavation indicated concentrations of 170,000 ppb TPHd, 15,000 ppb TPHg, 286 ppb benzene, 698 ppb toluene, 300 ppb ethylbenzene, 808 ppb total xylenes, and 284,000 ppb oil and grease.

### **2.2 Previous Assessments**

In September 1992, a preliminary study was performed by Environ of Emeryville, California, to evaluate soil and groundwater conditions at the site and at neighboring sites as part of a due diligence investigation associated with the sale of the property. This study indicated that hydrocarbon constituents reported in the soil and grab groundwater samples at the corporation yard were possibly a result of regional impact.

In November 1992, ACC performed a subsurface environmental site assessment of the soil around the former tank excavation. Concentrations of TPHg and motor oil were detected in the soil and

groundwater samples collected from the borings. Laboratory analysis of the soil samples indicated concentrations up to 370 ppm TPHg, 12 ppm TPHd, 5,342 ppm motor oil, 76.94 ppm benzene, 73.9 ppm toluene, 30.4 ppm ethylbenzene, and 95.41 ppm xylenes.

In November 1993, the **three fiberglass gasoline USTs** were removed from the property. Soil samples collected from the excavation indicated concentrations up to 1.3 ppm TPHg, 0.019 ppm benzene, and 0.018 ppm toluene. Initial groundwater samples collected from the excavation indicated 27,000 ppb TPHg, 1,200 ppb benzene, 5,100 ppb toluene, 690 ppb ethylbenzene, and 5,700 ppb xylenes. During removal of the tanks, approximately 3,500 gallons of water were removed from the excavation. Analysis of subsequent groundwater samples from the excavation indicated concentrations of 210 ppb TPHg and 14 ppb xylenes. Due to the detectable levels reported in the soil and groundwater samples, additional groundwater investigations were requested from Alameda County Health Care Services Agency (ACHCSA).

In February 1994, four additional borings were drilled on site and converted into 2-inch-diameter monitoring wells (**MW-1, MW-2, MW-3, and MW-4**). The monitoring wells were used to evaluate the extent of groundwater impact from the two former excavations (Figure 2). Laboratory analysis of the groundwater samples collected in February 1994 from monitoring wells MW-1 and MW-4 (downgradient from the tank excavations) indicated below detectable levels of the constituents evaluated. The groundwater results from monitoring well MW-1 indicated a downgradient extent of groundwater impact. Laboratory analysis of groundwater samples collected from monitoring wells MW-2 and MW-3 (upgradient of the former tank excavations) indicated detectable levels of constituents. Groundwater samples collected from borings MW-2 and MW-3 indicated detectable levels of TPHd, TPHg, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Motor oil was reported in the soil collected from boring MW-2. However, motor oil was not detected in the groundwater sample collected from monitoring well MW-2. A concentration of TPHd was only detected in the soil from boring MW-2.

An additional soil and groundwater investigation was conducted May 9, 1994, to evaluate possible upgradient sources on site. The investigation included drilling five borings upgradient (east) of existing monitoring wells MW-2 and MW-3. Laboratory analysis of the soil samples collected during the additional investigation indicated detectable concentrations of TPHd up to 11 ppm and motor oil up to 100 ppm. No detectable concentrations of TPHg and BTEX were reported in the soil samples analyzed. Groundwater was encountered at a depth of approximately 5 to 6 feet below ground surface (bgs) during the additional investigation. Laboratory analysis of grab groundwater samples collected from the boreholes indicated nondetectable concentrations of TPHd, motor oil, and BTEX. A concentration of TPHg of 61 ppb was reported in one grab groundwater sample collected from one boring. Motor oil was not detected in the groundwater samples collected from the borings and monitoring wells. Results of the analytical data from previous investigations indicate that upgradient sources of TPHg and motor oil exist. Fine-grained fill material and Bay Mud appear to restrict the mobility of the petroleum hydrocarbons from impacting groundwater; however, groundwater flow direction data suggest that constituent movement is to the westerly direction, away from monitoring wells MW-2 and MW-3.

Based on the findings of the subsurface investigations, elevated concentrations of petroleum hydrocarbons in the soil and groundwater indicate that a "source" of impact still existed on site. To remediate the source, overexcavation of the area around the former tank excavation was recommended as a cost-effective means. The proposed scope of work, approved by the regulatory agencies, included excavating impacted soil in the vicinity of the former tank excavation, actively purging the groundwater during excavation, and destroying well MW-2 during excavation activity.

Interim remedial work as overexcavation of impacted soil around the former tank excavation (removed in 1992) was performed in the summer of 1995. Interim remedial action consisted of source removal including overexcavation and removal of approximately 2,250 cubic yards of impacted soil, removal of three previously unknown USTs, and removal of approximately 14,888 gallons of excavation water. During soil removal, four previously unknown USTs were discovered, and three were removed. One UST still exists at the site. Due to the adjacent building's integrity, the tank was not removed at the time of remedial action. The UST will be removed upon relocation of the building. In addition, during the final UST removal, additional overexcavation will be performed to removed obviously impacted soil not obtained during the 1995 remedial action.

Based on previous investigations conducted on site, the extent of impact in the soil and groundwater was in the immediate vicinity around former monitoring well MW-3 and the existing UST, adjacent to the portable buildings.

Due to the findings of the interim remedial action and the existence of previously unknown USTs, groundwater monitoring of the existing three wells (MW-1, MW-3, MW-4) has been reinstated. Quarterly groundwater monitoring will be performed until site evaluation supports less frequent intervals. This report documents the initial reinstatement groundwater monitoring.

### 3.0 FIELD PROCEDURES

#### 3.1 Groundwater Monitoring

Before groundwater sampling, the depth to the surface of the water table was measured from the top of the polyvinyl chloride casing using a Solinst water level meter. The water levels measurements were recorded to the nearest 0.01 foot with respect to mean sea level (MSL). Groundwater monitoring data obtained at the site is included in Appendix 1. Information regarding well elevations and groundwater level measurements is summarized in Table 1.

**TABLE 1 - GROUNDWATER DEPTH INFORMATION**

Well No.	Date Monitored	Well Elevation* (above MSL)	Depth to Groundwater	Groundwater Elevation
MW-1	02/14/94	6.78	3.69	3.09
	05/16/94		6.80	-0.02
	08/25/94		7.05	-0.27
	11/16/94		3.50	3.28
	02/14/95		3.91	2.87
	05/18/95		6.46	0.32
	03/27/96		4.32	2.46
MW-2	02/14/94	8.70	4.70	4.00
	05/16/94		4.74	3.96
	08/25/94		5.49	3.21
	11/16/94		5.03	3.67
	02/14/95		4.55	4.15
	05/18/95		4.77	3.93
	Destroyed		---	---
MW-3	02/14/94	8.83	4.57	4.26
	05/16/94		4.78	4.05
	08/25/94		5.93	2.90
	11/16/94		4.04	4.79
	02/14/95		4.55	2.72
	05/18/95		4.49	4.34
	03/27/96		4.51	4.32
MW-4	02/14/94	5.45	1.69	3.76
	05/16/94		2.36	3.09
	08/25/94		3.25	2.20
	11/16/94		1.01	4.44
	02/14/95		6.11	2.72
	05/18/95		2.32	3.13
	03/27/96		2.35	3.10

Notes: \*All measurements are reported in feet; well elevation measured to top of casing

### 3.2 Groundwater Gradient

Groundwater elevations were calculated from water level measurements collected in the wells on March 27, 1996. Groundwater gradient was calculated using this data. The gradient was evaluated by triangulation using the elevation of the potentiometric surface measured with respect to mean sea level datum. As shown in Figure 3, general direction of groundwater flow is west-northwest at a

gradient of 0.033 foot/foot. Historic groundwater flow direction on site is summarized in Table 2. The groundwater gradient has increased slightly and flow direction is toward the west compared with previous sampling periods.

**TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION**

Date Monitored	Gradient (foot/foot)	Direction
02/14/94	0.01	west
05/16/94	0.025	west
08/25/94	0.031	west
11/16/94	0.013	west
02/14/95	0.014	northwest
05/18/95	0.033	west
03/27/96	0.033	west-northwest

### 3.3 Groundwater Sampling

After water level measurements were collected, each onsite well was purged by hand using a designated, disposable polyethylene bailer for each well. Groundwater pH, temperature, and electrical conductivity were monitored during well purging. Each well was considered to be purged when these parameters stabilized. Three to four well volumes were removed to purge each well. The worksheet of conditions monitored during purging is included as Appendix 1.

After the groundwater level had recovered to a minimum of approximately 85 percent of its static level, water samples were obtained from wells MW-1, MW-3, and MW-4 using disposable polyethylene bailers. Two 40-milliliter laboratory-supplied VOA vials, without headspace, were filled from the water collected from each monitoring well. Sample containers were labeled with self-adhesive, preprinted tags. The samples were stored in a pre-chilled, insulated container pending delivery to a state-certified laboratory for analysis.

Water purged during development and sampling was temporarily stored on site in Department of Transportation approved, 55-gallon drums pending laboratory analysis and proper disposal.

### 4.0 FINDINGS

Groundwater samples were collected from monitoring wells MW-1, MW-3, and MW-4 and submitted to Chromalab, Inc., for analysis of TPHg and BTEX by EPA Method 8015M/8020 and total extractable petroleum hydrocarbons (TEPH) as diesel, kerosene, and motor oil by EPA Method 8015M. Analytical results from the groundwater samples are summarized in Table 3. Analytical results and chain of custody records are included as Appendix 2.



**TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Well No.	Date Sampled	TPHg (µg/L)	TEPH (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)
MW-1	02/14/94	< 50	< 50	<0.5	<0.5	<0.5	<0.5
	05/23/94	< 50	< 50	<0.5	<0.5	<0.5	<0.5
	08/25/94	< 50	NT	<0.5	<0.5	<0.5	<0.5
	11/16/94	< 50	NT	<0.5	<0.5	<0.5	<0.5
	02/14/95	< 50	NT	<0.5	<0.5	<0.5	<0.5
	05/18/95	< 50	NT	<0.5	<0.5	<0.5	<0.5
	03/27/96	< 50	120(d)*	<0.5	<0.5	<0.5	<0.5
MW-2	02/14/94	200	< 50	1.7	<0.5	1.1	1.1
	05/23/94	600	< 50	1.8	0.9	0.7	2.1
	08/25/94	70	NT	< 50	<0.5	<0.5	0.5
	11/16/94	< 50	NT	< 50	<0.5	<0.5	0.6
	02/14/95	160	NT	0.7	0.6	<0.5	1.0
	05/18/95	50	NT	<0.5	<0.5	<0.5	0.6
	Destroyed	---	---	---	---	---	---
MW-3	02/14/94	780	< 50	0.6	0.6	1.7	2.7
	05/23/94	680	< 50	<0.5	<0.5	2.2	2.2
	08/25/94	310	NT	6.4	2.7	1.9	4.1
	11/16/94	650	NT	1.6	1.5	<0.5	2.7
	02/14/95	70	NT	<0.5	<0.5	<0.5	<0.5
	05/18/95	470*	NT	<0.5	1.1	0.7	0.6
	03/27/96	740 *	390(d)*	7.9 *	19	3.0	8.0
MW-4	02/14/94	< 50	< 50	<0.5	<0.5	<0.5	<0.5
	05/23/94	93	< 50	<0.5	<0.5	<0.5	<0.5
	08/29/94	< 50	NT	<0.5	<0.5	<0.5	<0.5
	11/16/94	100	NT	2.7	<0.5	<0.5	1.0
	02/14/95	60	NT	<0.5	<0.5	<0.5	<0.5
	05/18/95	< 50	NT	<0.5	<0.5	<0.5	<0.5
	03/27/96	< 50	< 50	<0.5	<0.5	<0.5	<0.5

Notes: µg/L = micrograms per liter (approximately equivalent to ppb)  
 < = less than analytical reporting limit indicated  
 NT = Not tested for this analyte  
 d = The noted concentration is TEPH as diesel  
 \* Hydrocarbons in diesel range do not match standard profile

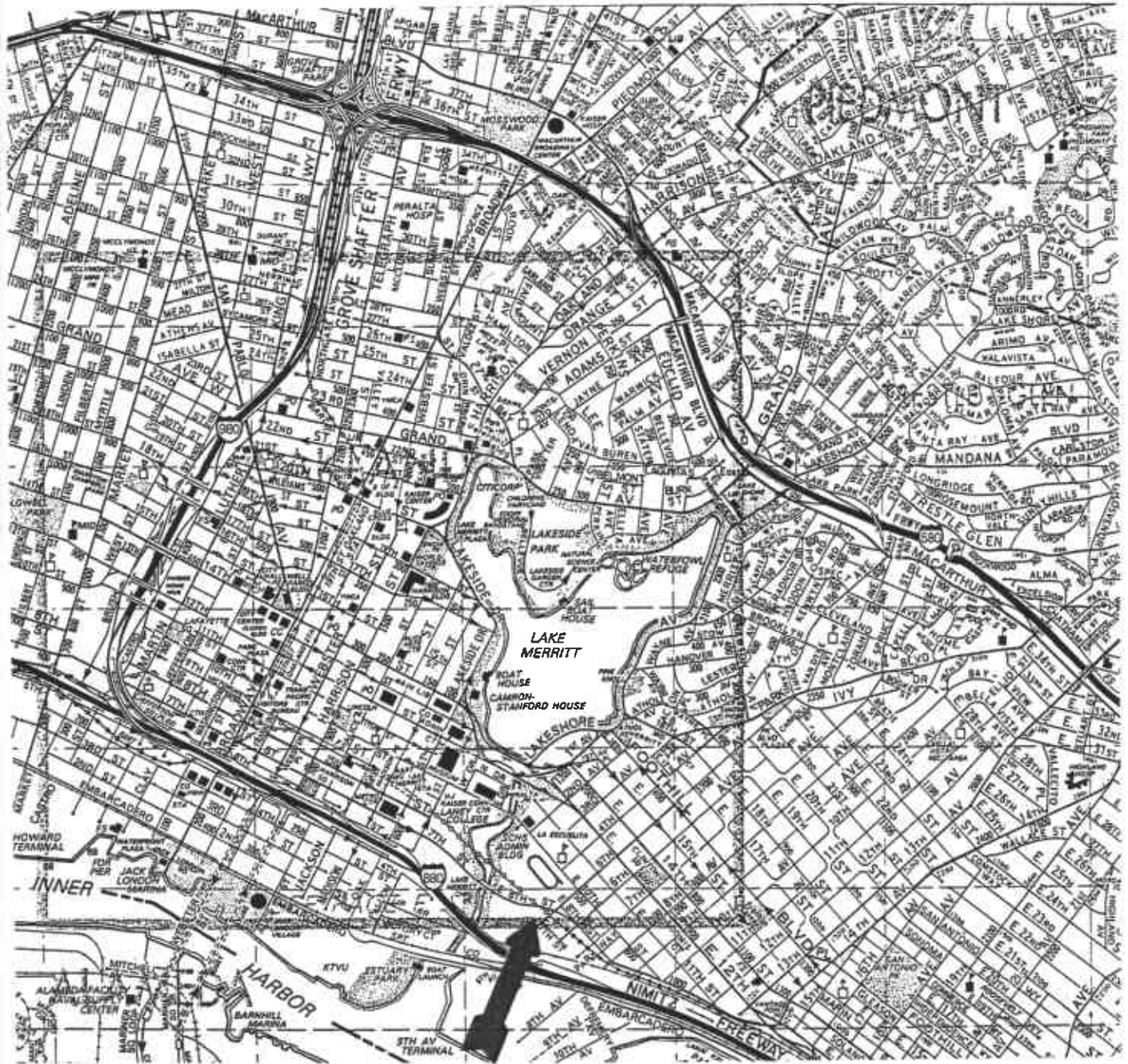
## 5.0 DISCUSSION

Groundwater flow direction and gradient are consistent with previous sampling events (west at 0.033 foot/foot). The concentrations of petroleum hydrocarbons **have increased since the** May 18, 1995, sampling event. Recent remedial action in the summer 1995 included removing impacted soil in the vicinity of and upgradient of wells MW-1 and MW-3. During the remedial action, four previously unknown USTs were discovered adjacent to destroyed well MW-2. To maintain the integrity of an adjacent building, **one UST was left in place**, upgradient of well MW-1. Soil around the previously unknown UST consisted of stiff clay below alternating layers of fill material, including buried asphalt and oil-coated baserock. These materials may have caused preferential pathways for groundwater flow in the subsurface. Removal of these materials and replacement with fill material with consistent porosity and grade may have aided the groundwater flow to a more regional pattern. As a result of the regional groundwater flow direction, petroleum hydrocarbons were observed in well MW-1.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

This report documents the initial groundwater monitoring event conducted after interim remedial action was performed in summer 1995. Results of the groundwater investigation indicated detectable concentrations of petroleum hydrocarbons in wells MW-1 and MW-3. The concentrations of TPHg have increased since the previous sampling event conducted before interim remedial action. The interim remedial action appears to have influenced groundwater flow and constituent movement. Groundwater flow and gradient were calculated to be essentially the same both before and after interim remedial action. However, the removal of preferential pathways and replacement of subsurface material with fill material that allows more consistent groundwater movement may have aided in the migration of constituent downgradient toward well MW-1. Beyond the boundaries of the former excavation the groundwater flow will be restricted due to the fine grained material in the subsurface.

In light of the recent interim remedial action and requirements of the ACHCSA and the Regional Water Quality Control Board, **the site qualifies as a low risk groundwater case**. As such, monitoring and sampling groundwater monitoring wells **semiannually** should be adequate in demonstrating plume stability and documenting established trends in groundwater quality improvement.

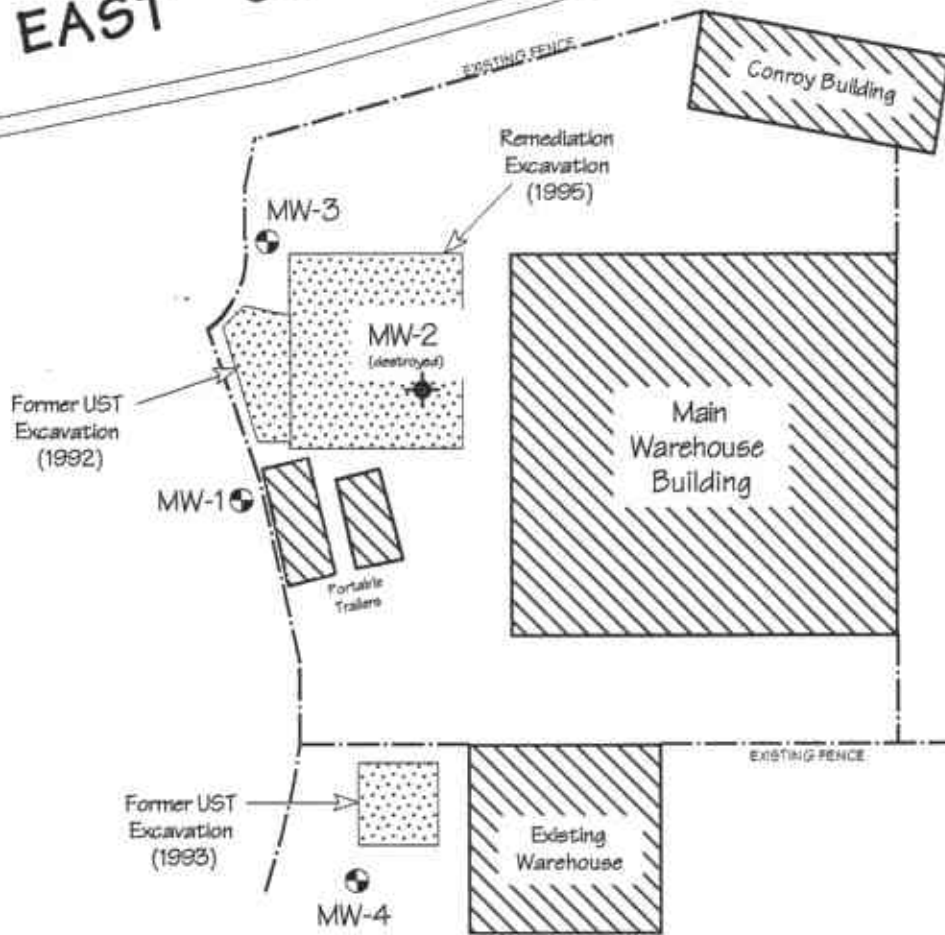


SOURCE: THOMAS BROTHERS GUIDE, 1990 ed.

<b>Location Map</b> <b>Peralta Community College District</b> <b>Maintenance Yard</b> <b>501 5th Avenue, Oakland, California</b>	
Figure Number: 1.0	Scale: 1" = 1/4 mi
Drawn By: JVC	Date: 3/27/96
Project Number: 6045-14	
<b>ACC Environmental Consultants</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	

EAST 8th STREET

5th AVENUE



Scale In Feet



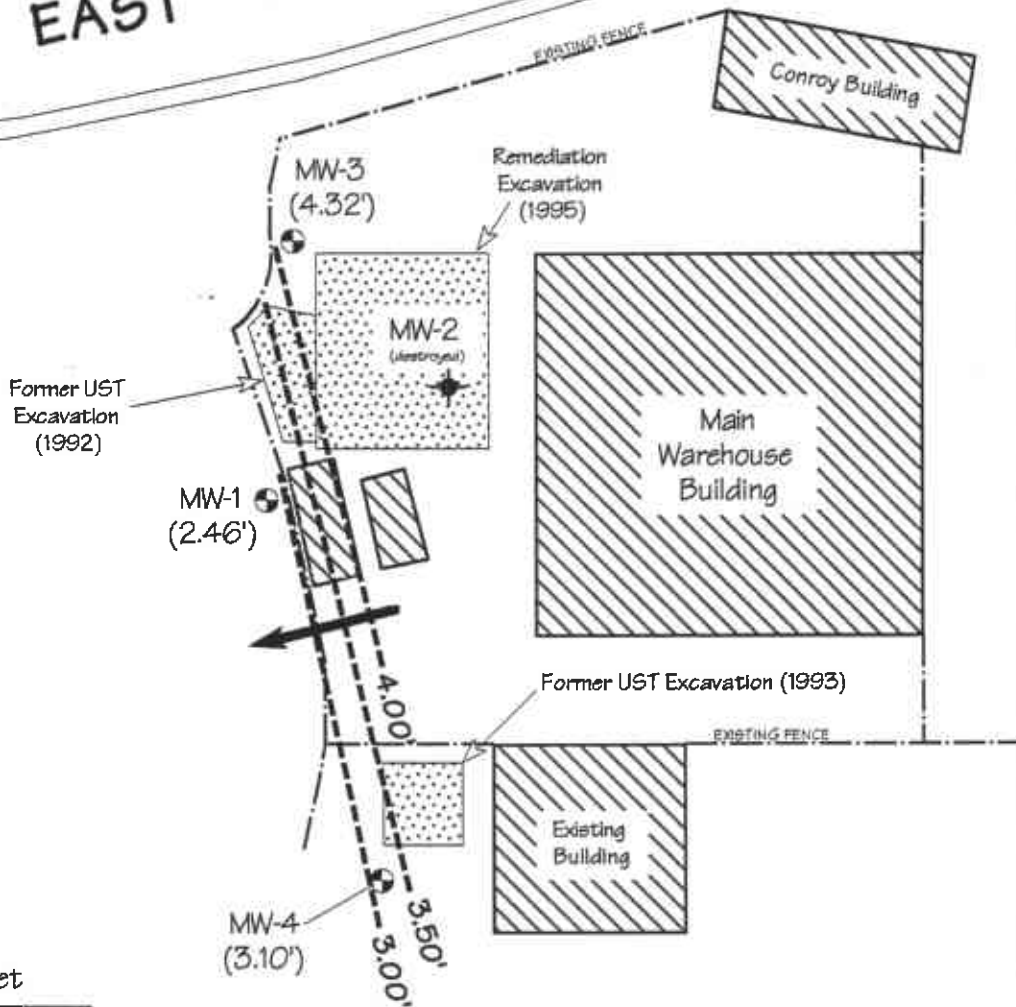
**Legend**

- MW-3 - Existing Groundwater Monitoring Well
- MW-2 - Former Groundwater Monitoring Well (destroyed)
- Former Excavation

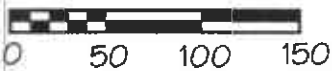
<p><b>Site Plan</b>  <b>Peralta Community College District</b>  <b>Maintenance Yard</b>  <b>501 5th Avenue, Oakland, California</b></p>	
Figure Number: 2.0	Scale: 1" = 100'
Drawn By: JVC	Date: 3/27/96
Project Number: 6045-14	
<p><b>ACC Environmental Consultants</b>                  7977 Capwell Drive, Suite 100                  Oakland, California 94621                  (510) 638-8400 Fax: (510) 638-8404</p>	

EAST 8th STREET

5th AVENUE



Scale In Feet



NOTE: Groundwater Elevations Measured in Feet Above Mean Sea-Level on 3/27/96

Legend

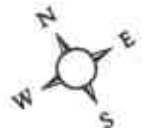
- MW-3 - Existing Groundwater Monitoring Well
- MW-2 - Former Groundwater Monitoring Well (destroyed)
- - - - - Groundwater Elevation Contour (interval = 0.5 ft)
- Approximate Groundwater Flow Direction: 3/27/96

Groundwater Gradient Map  
 Peralta Community College District  
 Maintenance Yard  
 501 5th Avenue, Oakland, California

Figure Number: 3.0      Scale: 1" = 100'  
 Drawn By: JVC      Date: 3/27/96

Project Number: 6045-14

ACC Environmental Consultants  
 7977 Capwell Drive, Suite 100  
 Oakland, California 94621  
 (510) 638-8400 Fax: (510) 638-8404





**WELL MONITORING WORKSHEET**

---

JOB NAME: PERALTA CCD YARD	PURGE METHOD: MANUAL BAILING
SITE ADDRESS: 501 FIFTH AVENUE	SAMPLED BY: J. CONCLIN / E. CISNEROS
JOB #: 6045-4	LABORATORY: CHROMALAB
DATE: 3-27-96	ANALYSIS: TEPH, TPH-GAS, BTEX
Onsite Drum Inventory SOIL: 1-100% ABS. PADS.	MONITORING <input checked="" type="checkbox"/> DEVELOPING <input type="checkbox"/>
EMPTY: WATER: 1-50%	SAMPLING <input checked="" type="checkbox"/>

	PURGE		HYDAC READINGS				OBSERVATIONS
	VOLUME		pH	Temp. (F)	Cond. un/cm		
<b>WELL: MW-1</b>	(Gal)						<input type="checkbox"/> Froth
DEPTH OF BORING: 14.33'	1.6		7.39	66.7	386		<input type="checkbox"/> Sheen
DEPTH TO WATER: 4.32'	3.2		7.48	66.3	381		<input type="checkbox"/> Odor Type _____
WATER COLUMN: 10.01'	4.8		7.56	66.1	362		<input type="checkbox"/> Free Product
WELL DIAMETER: 2"							Amount _____ Type _____
WELL VOLUME: ≈ 1.6 gal							<input type="checkbox"/> Other
COMMENTS:							
	↓						
	8.0		7.55	66.0	360		
<b>WELL: MW-3</b>	(Gal)						<input type="checkbox"/> Froth
DEPTH OF BORING: 14.22'	1.6		8.05	66.8	407		<input type="checkbox"/> Sheen
DEPTH TO WATER: 4.51'	3.2		7.82	66.5	372		<input type="checkbox"/> Odor Type _____
WATER COLUMN: 9.71'	4.8		7.61	66.4	361		<input type="checkbox"/> Free Product
WELL DIAMETER: 2"							Amount _____ Type _____
WELL VOLUME: ≈ 1.6 gal							<input type="checkbox"/> Other
COMMENTS:							
	↓						
	8.0		7.60	66.4	360		
<b>WELL: MW-4</b>	(Gal)						<input type="checkbox"/> Froth
DEPTH OF BORING: 14.35'	2.0		8.11	66.3	382		<input type="checkbox"/> Sheen
DEPTH TO WATER: 2.35'	4.0		7.88	66.1	375		<input type="checkbox"/> Odor Type _____
WATER COLUMN: 12.00'	6.0		7.73	65.8	371		<input type="checkbox"/> Free Product
WELL DIAMETER: 2"							Amount _____ Type _____
WELL VOLUME: ≈ 2.0 gal							<input type="checkbox"/> Other
COMMENTS:							
	↓						
	8.0		7.72	65.9	370		



**ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD**

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# CHROMALAB, INC.

Environmental Services (SDB)

April 1, 1996

Submission #: 9603185

ACC ENVIRONMENTAL CONSULTANTS

Atten: Misty Kaltreider

Project: PERALTA MAINT. YARD  
Received: March 28, 1996

Project#: 6045-14

re: 3 samples for Gasoline and BTEX analysis.  
Method: EPA 5030/8015M/602/8020

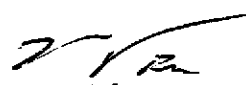
Sampled: March 27, 1996


Matrix: WATER

Run: 10852-1 Analyzed: March 31, 1996

Spl #	Sample ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
120992	MW-1	N.D.	N.D.	N.D.	N.D.	N.D.
120993	MW-3	740	7.9	19	3.0	8.0
120994	MW-4	N.D.	N.D.	N.D.	N.D.	N.D.

Reporting Limits	50	0.5	0.5	0.5	0.5
Blank Result	N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)	101	119	110	114	119

  
June Zhao  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

April 4, 1996

Submission #: 9603185

ACC ENVIRONMENTAL CONSULTANTS

Atten: Misty Kaltreider  
Project: PERALTA MAINT. YARD  
Received: March 28, 1996

Project#: 6045-4

re: 3 samples for Total Extractable Petroleum Hydrocarbons (TEPH) analysis.

Method: EPA 3510/8015M

Sampled: March 27, 1996


Matrix: WATER


Extracted: March 29, 1996

Run: 10875-D

Analyzed: March 30, 1996

Spl #	Sample ID	Kerosene (ug/L)	Diesel (ug/L)	Motor Oil (ug/L)
120992	MW-1 For above sample:	N.D. Hydrocarbons in the Diesel range do not match our hydrocarbon standard profiles.	120	N.D.
120993	MW-3 For above sample:	N.D. Hydrocarbons in the Diesel range do not match our hydrocarbon standard profiles.	390	N.D.
120994	MW-4	N.D.	N.D.	N.D.
Reporting Limits		50	50	500
Blank Result		N.D.	N.D.	N.D.
Blank Spike Result (%)		--	84	--

  
Dennis Mayugba  
Chemist

  
Alex Tam  
Semivolatiles Supervisor

CHROMALAB, INC.  
SAMPLE RECEIPT CHECKLIST

Client Name ACC

Date/Time Received 3/28/96 1547

Project PERALTA

Received by B. Moran Date / Time

Reference/Subm # 27124/9603185

Carrier name \_\_\_\_\_

Checklist completed by: Chowley 3/29/96  
Signature / Date

Logged in by MP 3/28/96  
Matrix H2O Initials / Date

Shipping container in good condition? NA \_\_\_ Yes \_\_\_ No \_\_\_

Custody seals present on shipping container? Intact \_\_\_ Broken \_\_\_ Yes \_\_\_ No \_\_\_

Custody seals on sample bottles? Intact \_\_\_ Broken \_\_\_ Yes \_\_\_ No \_\_\_

Chain of custody present? Yes  No \_\_\_

Chain of custody signed when relinquished and received? Yes  No \_\_\_

Chain of custody agrees with sample labels? Yes  No \_\_\_

Samples in proper container/bottle? Yes  No \_\_\_

Samples intact? Yes  No \_\_\_

Sufficient sample volume for indicated test? Yes  No \_\_\_

VOA vials have zero headspace? NA \_\_\_ Yes  No \_\_\_

Trip Blank received? NA \_\_\_ Yes \_\_\_ No

All samples received within holding time? Yes  No \_\_\_

Container temperature? \_\_\_\_\_

pH upon receipt 6 pH adjusted 2.2 Check performed by: CR NA \_\_\_

Any **NO** response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

Client contacted? \_\_\_\_\_ Date contacted? \_\_\_\_\_

Person contacted? \_\_\_\_\_ Contacted by? \_\_\_\_\_

Regarding? \_\_\_\_\_

Comments: pH adjusted for TEPH analysis

Corrective Action: \_\_\_\_\_

185/120992-120994

SUBM #: 9603185 REP: FM  
CLIENT: ACC  
DUE: 04/04/96  
REF #: 27126

27126  
Chain of Custody

# CHROMALAB, INC.

DATE 3/27/96 PAGE 1 OF 1

Environmental Services (SDB) (DOHS 1094)

PROJ. MGR M. KALTREIDER  
 COMPANY ACC Environmental Consultants  
 ADDRESS 7977 Capwell Drive, Suite 100  
Oakland, California 94621

SAMPLERS (SIGNATURE) John Conklin (PHONE NO.) (510) 638-8400  
 (FAX NO.) (510) 638-8404

## ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, 8+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS
MW-1	3/27/96		H <sub>2</sub> O	COOL	X	X	X														5
MW-3	"		"	"	X	X	X														5
MW-4	"		"	"	X	X	X														5

**PROJECT INFORMATION**

PROJECT NAME: PERALTA MAINT. YARD  
 PROJECT NUMBER: 6045-4  
 P.O. #: 6045-4

**SAMPLE RECEIPT**

TOTAL NO. OF CONTAINERS: 15  
 HEAD SPACE: \_\_\_\_\_  
 REC'D GOOD CONDITION/COLD: \_\_\_\_\_  
 CONFORMS TO RECORD: \_\_\_\_\_

TAT: STANDARD 5-DAY    24    48    72    OTHER

SPECIAL INSTRUCTIONS/COMMENTS:

RELINQUISHED BY <u>John Conklin</u> (SIGNATURE) (TIME) <u>JOHN CONKLIN</u> (PRINTED NAME) (DATE) <u>ACC</u> (COMPANY)	1.	RELINQUISHED BY <u>[Signature]</u> (SIGNATURE) (TIME) <u>[Printed Name]</u> (PRINTED NAME) (DATE) <u>[Company]</u> (COMPANY)	2.	RELINQUISHED BY <u>[Signature]</u> 1843 (SIGNATURE) (TIME) <u>[Printed Name]</u> 3-28-96 (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	3.
RECEIVED BY <u>[Signature]</u> 1547 (SIGNATURE) (TIME) <u>[Printed Name]</u> 3-28-96 (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	1.	RECEIVED BY <u>[Signature]</u> (SIGNATURE) (TIME) <u>[Printed Name]</u> (PRINTED NAME) (DATE) <u>[Company]</u> (COMPANY)	2.	RECEIVED BY (LABORATORY) <u>Mimie Pak</u> 1843 (SIGNATURE) (TIME) <u>Mimie Pak</u> 3/28/96 (PRINTED NAME) (DATE) <u>Chromalab</u> (LAB)	3.