



QUARTERLY  
GROUNDWATER  
MONITORING REPORT

June 17, 1996

Blumert Trust  
490 43rd Street  
Oakland, California

Prepared For:  
Mr. Jeffrey A. Hirsch  
Wells Fargo Trust

ACC Project No. 96-6305-1 1

OAKLAND ▪ SACRAMENTO  
SEATTLE ▪ LOS ANGELES



WELLS FARGO BANK

Private Banking Group  
Real Estate Asset Management

525 Market Street, 18th Floor  
P. O. Box 63939  
San Francisco, CA 94163

June 21, 1996

Blumert

Mr. Dale Klettke  
Alameda County Health Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, CA 94502

ENVIRONMENTAL  
PROTECTION  
96 JUN 24 PM 3:09

Re: **Blumert Trust • Account #308-107222**  
**490 - 43rd Street/4300 Telegraph Avenue, Oakland, CA**  
**Property #001156**

Dear Mr. Klettke:

Enclosed is the most recent Groundwater Monitoring Report for the captioned property.

The contact person at ACC Environmental Consultants is Mr. Dave DeMent (510) 638 - 8400.

Please contact the undersigned or Mr. DeMent if we can be of any further assistance.

Sincerely,

Jeffrey A. Hirsch  
Assistant Vice President  
and Senior Asset Manager  
(415) 396 - 6743

cc: Clarence Stump (w/out encl)  
Cassandra Miller (w/out encl)  
Ken Cheitlen, Esq. (w/out encl)

**QUARTERLY GROUNDWATER MONITORING**

490 43rd Street  
Oakland, California

*ACC Project No. 6305-1.1*

Prepared for:

Mr. Jeffrey A. Hirsch  
Wells Fargo Trust  
525 Market Street, 18th Floor  
San Francisco, California

96 JUN 24 PM 3: 10  
ENVIRONMENTAL  
PROTECTION

June 17, 1996

Prepared by:

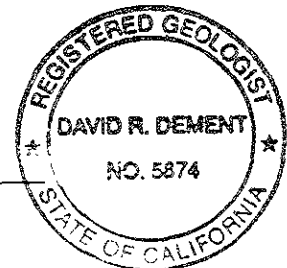


Misty Kaltreider  
Project Geologist

Reviewed by:



David R. DeMent, RG  
Senior Geologist



**TABLE OF CONTENTS**

	Page
<b>1.0 INTRODUCTION</b> .....	1
<b>2.0 BACKGROUND</b> .....	1
<b>3.0 GROUNDWATER MONITORING AND SAMPLING</b> .....	2
3.1 Groundwater Monitoring .....	2
3.2 Groundwater Gradient .....	3
3.3 Groundwater Sampling .....	4
<b>4.0 RESULTS OF GROUNDWATER MONITORING</b> .....	4
<b>5.0 DISCUSSION</b> .....	6
<b>6.0 CONCLUSIONS</b> .....	8
<b>7.0 RECOMMENDATIONS</b> .....	8
<b>8.0 REFERENCES</b> .....	9

**TABLES**

1 - Groundwater Monitoring Data .....	3
2 - Groundwater Gradient and Flow Direction .....	4
3 - Groundwater Sample Analytical Results .....	5

**FIGURES**

- 1 - Location Map
- 2 - Site Plan
- 3 - Gradient Map

**APPENDICES**

- 1 - Well Monitoring Worksheet
- 2 - Analytical Results and Chain of Custody Record

## **GROUNDWATER MONITORING REPORT**

**490 43rd Street**  
**Oakland, California**

### **1.0 INTRODUCTION**

Groundwater monitoring and sampling was conducted by ACC Environmental Consultants, Inc., (ACC) for Wells Fargo Trust on behalf of the Blumert Trust, 490 43rd Street, Oakland, California (Figure 1). Groundwater monitoring and sampling was conducted at the request of the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA) for additional site investigation and delineation of impacted groundwater.

The purpose of the work was to monitor groundwater flow direction and gradient and evaluate the local groundwater for the presence of petroleum hydrocarbons associated with former gasoline and paint thinner underground storage tanks (USTs). The locations of the groundwater monitoring wells and pertinent site features are illustrated on Figure 2.

### **2.0 BACKGROUND**

The site is located at the northeastern corner of Telegraph Avenue and 43rd Street, Oakland, California (Figure 1). The property is relatively flat, at an elevation of approximately 90 feet above mean sea level (MSL). The approximate groundwater flow direction is to the southwest.

The facility formerly operated one 1,000-gallon gasoline UST and one 350-gallon paint thinner UST, which were removed on December 11, 1991 (Figure 2). Laboratory analysis of soil samples collected underneath the gasoline tank indicated concentrations up to 220 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHg) and minor concentrations of benzene, toluene, ethylbenzene, and total xylenes (BTEX). Laboratory analysis of soil samples collected under the paint thinner tank indicated concentrations up to 25 ppm total petroleum hydrocarbons as paint thinner (TPH as paint thinner). Groundwater was observed in the excavation at a depth of approximately 12.5 feet below ground surface (bgs).

The tank pit, which contained both former USTs, was overexcavated on March 31, 1992, to remove additional impacted soil. Laboratory analysis of soil samples collected from excavation sidewalls indicated concentrations up to 720 ppm TPHg, 30 ppm BTEX constituents, and 190 ppm TPH as paint thinner.

Three groundwater monitoring wells were installed on April 12, 1993, by Kaprealian Engineering, Inc., (KEI), and have been monitored periodically since that time. Gradient has been calculated at approximately 0.01 foot/foot and flow direction has predominantly been to the south-southwest. Groundwater samples from the three groundwater monitoring wells have indicated TPHg concentrations ranging from 170 to 2,100 parts per billion (ppb) in well MW-1, 11,000 to 18,000 ppb in well MW-2, and 1,500 to 14,000 ppb in well MW-3. TPH as paint thinner concentrations have ranged from 65 to 1,200 ppb in well MW-1, 670 to 11,000 ppb in well MW-2, and 480 to 8,700 ppb in well MW-3.

On June 1, 1994, KEI drilled exploratory soil borings EB1 and EB2 (Figure 2). Concentrations of TPHg and TPH as paint thinner were detected in soil samples collected from boring EB2 at a depth of 10 to 12 feet bgs. Grab groundwater samples from borings EB1 and EB2 indicated concentrations of TPHg at 3,400 ppb and 9,200 ppb, respectively, and TPH as paint thinner at 7,000 ppb and 3,700 ppb, respectively. Sieve analysis of saturated soil at the site determined that the soil should be classified as silty sand (SM).

To further evaluate the extent of hydrocarbon impact to soil and groundwater, ACC performed an exploratory boring investigation in April 1996. ACC drilled two exploratory soil borings (SB1 and SB2) to characterize soil conditions in the immediate vicinity of the former tank excavation (Figure 2), and six additional exploratory borings (B-3 through B-8) were drilled upgradient and downgradient of the former USTs to characterize groundwater in the general vicinity of the former tank excavation. A TPH as paint thinner concentration was detected in sample SB1-9.0 at 52 ppm and in sample SB2-9.0 at 78 ppm. Due to sample interference, the TPHg reporting limit in soil sample SB2-9.0 was raised to 500 ppm, but the lack of detectable BTEX concentrations indicated that TPHg was probably not present.

Grab groundwater samples were collected from borings B3 through B8 and analyzed for TPHg, BTEX, and TPH as paint thinner. Concentrations of TPHg ranged from nondetect in samples collected from borings B3 and B8 to 46,000 ppb in boring B6. Concentrations of TPH as paint thinner ranged from nondetect in samples collected from borings B3 and B8 to 16,000 ppb in boring B7.

Petroleum hydrocarbon impacts to shallow groundwater were not fully delineated, but concentrations of TPHg and TPH as paint thinner appear to have migrated preferentially along utility trench lines. General aquifer quality appears to be poor, and the saturated zone has been classified as a silty sand (SM). Subsurface groundwater migration is believed to be minimal based on soil type, flat hydraulic gradient, and minimal surface water infiltration due to asphalt and concrete capping the general area.

### 3.0 GROUNDWATER MONITORING AND SAMPLING

ACC monitored and sampled wells MW-1 through MW-3 on May 30, 1996. This sampling was approximately 6 months after KEI sampled the wells on December 5, 1995. Work at the site included measuring depth to water, subjectively evaluating groundwater in the wells, and purging and sampling the wells for laboratory analysis. Well locations are illustrated on Figure 2.

#### 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 (PVC) well casing using a Solinst water level meter. The water level measurements were recorded to the nearest 0.01 foot with respect to MSL. Groundwater monitoring data obtained at the site is included in Appendix 1. Information regarding well elevations and groundwater levels are summarized in Table 1.

**TABLE 1 - GROUNDWATER MONITORING DATA**

Well Number	Date	Depth to Water*	Groundwater Elevation
MW-1 (91.02')	04/14/94	11.19	79.83
	05/23/94	10.75	80.27
	06/16/94	11.72	79.30
	04/12/95	9.72	81.31
	05/10/95	10.11	80.91
	06/28/95	10.91	80.11
	12/05/95	12.21	78.81
	05/30/96	10.23	80.79
MW-2 (90.55')	04/14/94	10.95	79.60
	05/23/94	10.52	80.03
	06/16/94	11.49	79.06
	04/12/95	9.59	80.96
	05/10/95	10.00	80.55
	06/28/95	10.95	79.60
	12/05/95	12.34	78.21
	05/30/96	10.01	80.54
MW-3 (90.90')	04/14/94	11.23	79.67
	05/23/94	10.74	80.16
	06/16/94	11.81	79.09
	04/12/95	9.72	81.18
	05/10/95	10.16	80.74
	06/28/95	10.99	79.91
	12/05/95	12.39	78.51
	05/30/96	9.97	80.93

Notes: \*Depth to water measured in feet below top of casing.  
(91.02') = Surveyed elevations to the top of the PVC casing

### 3.2 Groundwater Gradient

The groundwater flow direction as determined from monitoring well data collected on May 30, 1996, is illustrated on Figure 3. Based on groundwater elevation calculations, groundwater flow is predominantly toward the southwest at an average gradient of 0.014 foot/foot. Historic groundwater gradient at the site is summarized in Table 2.

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

Date Monitored	Average Gradient (foot/foot)	Direction
04/14/94	0.007	south
05/23/94	0.008	south
06/16/94	0.007	south
04/12/95	0.010	south-southwest
05/10/95	0.011	south-southwest
06/28/95	0.010	south-southwest
12/05/95	0.020	south-southwest
05/30/96	0.014	southwest

Groundwater elevation fluctuated in each well since December 1995: water in well MW-1 increased 2 feet, well MW-2 increased 2.3 feet, and well MW-3 increased 2.4 feet. Groundwater elevations around well MW-2 are somewhat radial, possibly indicating influence from the excavation or adjacent utility trenches.

### 3.3 Groundwater Sampling

Before groundwater sampling, each well was purged using a disposable polyethylene bailer. Groundwater samples were collected when temperature, pH, and conductivity of the water stabilized and a minimum of four well casing volumes of water had been removed. Following purging, each well was allowed to recharge before sampling. When recovery to 80 percent of the static water level was observed, a sample was collected for analysis. When recovery to 80 percent of the static water level was estimated to exceed 2 hours, a sample was collected when sufficient volume was available to fill the sample containers. Groundwater conditions were monitored during purging and sampling. A copy of the well monitoring worksheet is presented as Appendix 1.

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

### 4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected from the groundwater monitoring wells were submitted to Chromalab, Inc., (Chromalab) in Pleasanton, California, following chain of custody protocol. Groundwater samples collected from the wells were analyzed for TPHg and TPH as paint thinner using EPA Method 8015 Modified, and BTEX and methyl tertiary butyl ether (MTBE) using EPA



Method 8020. A copy of the chain of custody record and laboratory analytical reports is included as Appendix 2.

Concentrations of TPHg were not detected in the water samples collected from wells MW-1 through MW-3, but varying concentrations of BTEX constituents were detected.

Due to the high toluene content of many paint thinners, ACC included a comment regarding the possible presence of a mixture of gasoline and paint thinner on the chain of custody. ACC believes this comment allowed the laboratory to include appropriate quality control measures to avoid including paint thinner components when calculating BTEX analytical results or BTEX components when calculating paint thinner analytical results.

ACC discussed the analytical results with Chromalab and we are satisfied the laboratory analytical results are representative. Chromalab stated that standard procedures are followed when both gasoline and paint thinner are suspected in a sample to avoid "double counting" since the constituents overlap on a chromatogram. ACC believes "double counting" may have occurred in previous sampling events, which resulted in erroneously high values.

Groundwater sample analytical results are summarized in Table 3.

**TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Well / Date	TPH Thinner	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1							
04/29/93	600	290	31	1.9	2.7	5.4	--
12/13/93	820	1,700	170	22	19	48	--
06/16/94	1,200	2,100	250	12	27	38	--
09/13/94	73	170	6.6	1.6	2.4	3.3	--
12/08/94	170	420	16	3.0	2.9	2.7	--
03/14/95	65	630	39	ND	7.0	8.6	--
06/28/95	130	720	100	7.8	23	32	--
10/13/95	900	290	8.6	0.55	2.8	1.4	--
12/05/95	70	94	5.6	ND	0.67	0.53	--
05/30/96	240	<50	62	<0.5	16	18	<5

Well / Date	TPH Thinner	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
<b>MW-2</b>							
04/29/93	4,100	11,000	2,400	51	76	160	--
12/13/93	2,600	11,000	1,400	66	150	94	--
06/16/94	11,000	18,000	2,100	ND	200	70	--
09/13/94	5,400	12,000	1,400	50	200	89	--
12/08/94	3,200	11,000	1,700	34	200	86	--
03/14/95	670	14,000	1,500	41	160	66	--
06/28/95	8,700	11,000	1,700	ND	230	78	--
10/13/95	1,500	9,400	1,200	41	200	61	--
12/05/95	24,000	150,000	890	200	720	500	--
05/30/96	4,400	<50	61	5.1	28	11	<5
<b>MW-3</b>							
04/29/93	5,800	8,500	840	17	40	42	--
12/13/93	3,500	6,200	580	120	65	120	--
06/16/94	4,700	7,700	910	ND	86	50	--
09/13/94	8,700	6,800	430	14	45	37	--
12/08/94	2,100	1,500	820	ND	52	28	--
03/14/95	480	5,600	250	11	25	30	--
06/28/95	2,100	14,000	650	18	70	54	--
10/13/95	430	2,500	270	1.9	15	10	--
12/05/95	5,400	4,200	250	ND	26	ND	--
05/30/96	2,900	<50	65	1.5	9.0	5.1	<5

Notes: All water results are reported in  $\mu\text{g/L}$  (parts per billion)  
ND= Not detected at laboratory reporting limit (see analytical report)

## 5.0 DISCUSSION

Following the approved sampling protocol, all three groundwater monitoring wells were monitored and sampled. The May 30, 1996, sampling event indicated that the concentrations of TPHg decreased approximately two-fold in well MW-1, 3,000-fold in well MW-2, and 80-fold in well MW-3 since the December 1995 sampling event. Concentrations of TPH as paint thinner increased approximately three-fold in well MW-1, decreased five-fold in well MW-2, and decreased two-fold in well MW-3 since December 1995. Benzene increased approximately 10-fold in well MW-1 but decreased 15-fold in well MW-2 and four-fold MW-3.

Groundwater gradient appears to vary slightly across the site, averaging approximately 0.014 foot/foot, and groundwater elevation contours are somewhat radial around well MW-2. ACC believes that because the wells are within close proximity, the accuracy of the groundwater elevation contours is reduced. Flow direction had been predominantly south-southwest, but calculated flow

direction on May 30, 1996, was approximately southwest (Figure 3). Groundwater gradient has been fairly consistent since April 1995 and groundwater elevation changes have been fairly uniform in each respective well.

Typically, concentrations of dissolved constituents in shallow groundwater at UST sites correlate with groundwater level. Concentrations increase as rising groundwater increases contact with residual constituents in soil, and concentrations decrease with falling groundwater levels. This is not the case at the subject site, and concentrations of TPHg and TPH as paint thinner do not correlate with calculated groundwater levels. In June 1994, groundwater levels decreased 1 foot in the three wells but concentrations decreased in well MW-1 and increased in wells MW-2 and MW-3. In April 1995, groundwater levels increased 2 feet in the three wells but concentrations of paint thinner decreased in each well and concentrations of TPHg increased in each well. In June 1995, groundwater levels decreased 1.2 to 1.3 feet in the three wells, but concentrations generally increased in each well. In December 1995, groundwater levels decreased 1.2 to 1.4 feet in the three wells and concentrations decreased in well MW-1 but increased in wells MW-2 and MW-3. In May 1996, groundwater levels increased 2.0 to 2.4 feet in the three wells but concentrations generally decreased in well MW-1 and decreased dramatically in wells MW-2 and MW-3.

Site investigation performed by ACC in April 1996 indicated that general aquifer quality in the area is poor due to soil type and clay content, flat hydraulic gradient, and minimal surface water infiltration. These factors further indicate that the potential for petroleum hydrocarbon migration is low. Dissolved constituents of concern were detected downgradient from the known source on the subject property. Preferential migration appears to occur along utility lines. A suspect source of petroleum hydrocarbons as gasoline may be located at 489 43rd Street. Because site investigation has not been performed at 489 43rd Street, its contribution to impacted groundwater in the vicinity is unknown.

Due to the high toluene content of many paint thinners, ACC included a comment regarding the possible presence of a mixture of gasoline and paint thinner in the samples on the chain of custody form. ACC believes this comment alerted the laboratory to include appropriate quality control measures to avoid including paint thinner components with BTEX analysis results or BTEX components to be included with paint thinner analysis.

ACC discussed the analytical results with Chromalab and we are satisfied the laboratory analytical results are representative. Chromalab stated that standard procedures are followed when both gasoline and paint thinner are suspected in a sample to avoid "double counting," because the constituents overlap on a chromatogram. ACC believes "double counting" may have occurred in previous sampling events.

Sample analyses of groundwater samples collected on May 30, 1996, were carefully performed to avoid quantifying the same analyte twice. ACC believes the analytical results are indicative of current groundwater conditions at the site.

## 6.0 CONCLUSIONS

Based on the findings listed above and criteria specified in a memorandum from the San Francisco Bay Regional Water Quality Control Board to local oversight agencies, dated January 5, 1996, ACC believes the site qualifies as a "Low Risk Groundwater Case." Site investigation and ACC's initial groundwater monitoring and sampling event in onsite wells have documented the following:

- Groundwater samples from monitoring wells MW-1 through MW-3 are highly representative of groundwater conditions in the vicinity of the former USTs due to their proximity to the former UST excavation;
- Dissolved petroleum hydrocarbons as gasoline and paint thinner continue to be detected in groundwater in the immediate vicinity of wells MW-1 through MW-3; MTBE was not detected in any of the wells;
- Concentrations of dissolved constituents continue to fluctuate but have demonstrated dramatic decreases in wells MW-2 and MW-3 with a corresponding 2 foot increase in groundwater elevation; and
- Petroleum hydrocarbon impact to groundwater appears to be declining naturally through bioremedial processes and passive bioremediation should be the preferred remedial alternative.

## 7.0 RECOMMENDATIONS

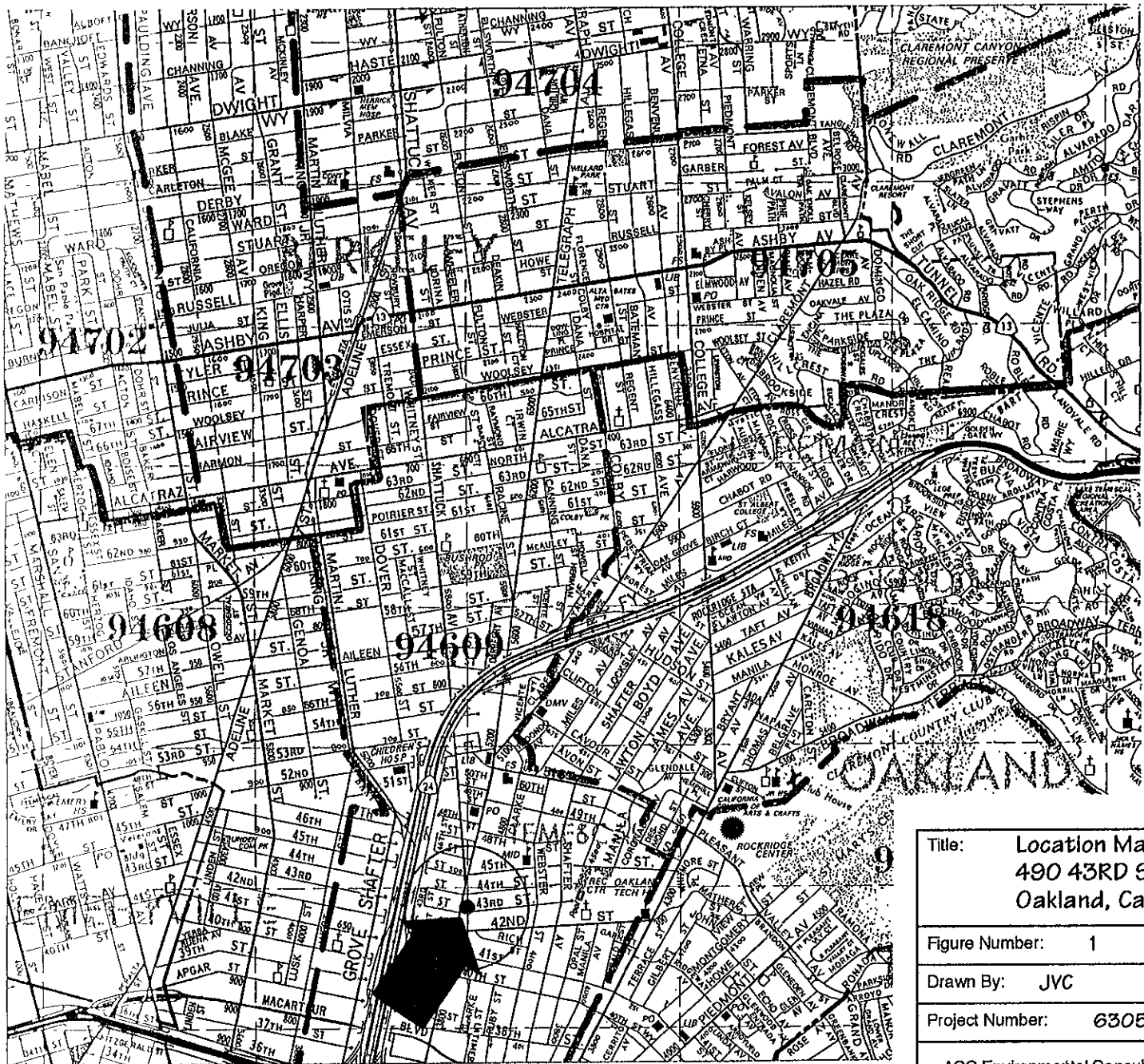
Since groundwater monitoring and sampling data have been collected quarterly since April 1993, seasonal trends have been characterized, and decreasing trends in concentrations of constituents of concern have been documented, ACC recommends the following:

- continuing groundwater monitoring in wells MW-1 through MW-3 biannually for 1 year, beginning immediately, and evaluating groundwater monitoring results at that time; and
- further analyze groundwater samples from wells MW-2 and MW-3 for total dissolved solids and total coliform to help evaluate overall groundwater quality at the site.

The next sampling event is tentatively scheduled for December 1996. ACC requests that the ACHCSA approve these recommendations in writing or provide a rationale why they are not appropriate to implement at this time.

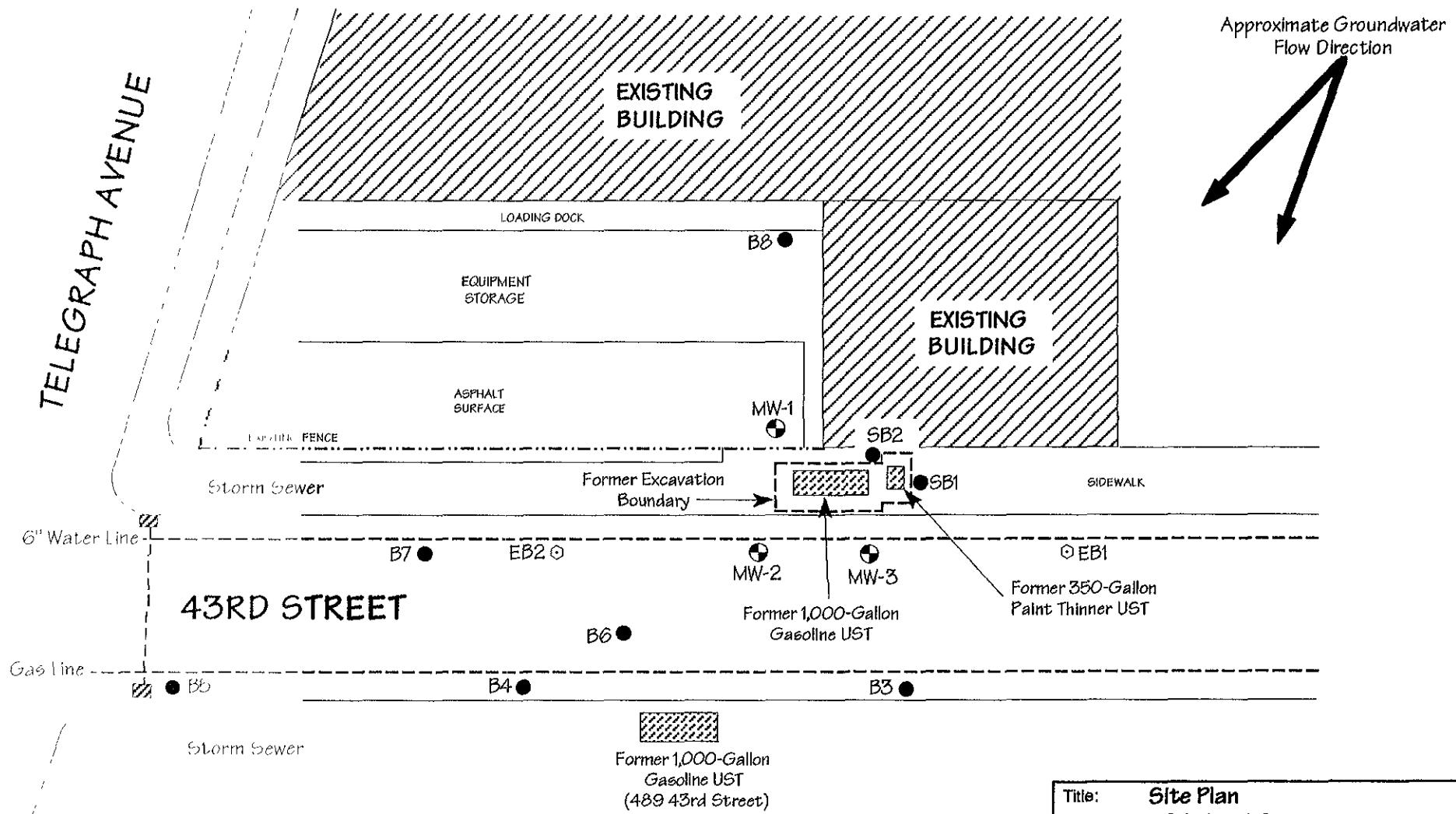
## 8.0 REFERENCES

- ACC Environmental Consultants, Inc. May 23, 1996. *Additional Site Investigation Report, 490 43rd Street, Oakland, CA.* Prepared for Wells Fargo Trust on behalf of the Blumert Trust.
- Kaprealian Engineering, Inc. January 18, 1996. *Quarterly Report, Walter Blumert Co., Inc., 490 43rd Street, Oakland, California.* Prepared for Wells Fargo Bank.
- Kaprealian Engineering, Inc. July 27, 1996. *Quarterly Report, Walter Blumert Co., Inc., 490 43rd Street, Oakland, California.* Prepared for Wells Fargo Bank.
- Kaprealian Engineering, Inc. July 20, 1994. *Continuing Subsurface Investigation and Quarterly Report, Walter Blumert Co., Inc., 490 43rd Street, Oakland, California.* Prepared for Wells Fargo Bank.
- California Regional Water Quality Control Board, San Francisco Bay Region. January 5, 1996. *Memorandum to: San Francisco Bay Area Agencies Overseeing UST Cleanup and Other Interested Parties.* Prepared by Mr. Kevin Graves, P.E.



SOURCE: THOMAS BROTHERS GUIDE

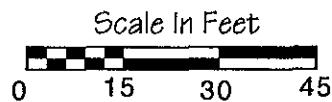
Title: Location Map 490 43RD Street Oakland, California	
Figure Number: 1	Scale:
Drawn By: JVC	Date: 12/19/95
Project Number: 6305-1.1	
ACC Environmental Consultants 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	



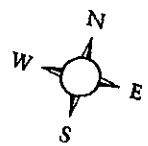
### Legend

- MW 2 - Existing Groundwater Monitoring Well
- B4 - ACC Soil Boring Location (April 16, 1996)
- EB2 - Kaprealian Engineering Boring Location
- Former Underground Storage Tank

Former 1,000-Gallon Gasoline UST (489 43rd Street)



Title: <b>Site Plan</b> <b>490 43rd Street</b> <b>Oakland, California</b>	
Figure Number: <b>2</b>	Scale: <b>1" = 30"</b>
Drawn By: <b>JVC</b>	Date: <b>4/17/96</b>
Project Number: <b>6305-1.1</b>	
<b>ACC Environmental Consultants</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	



TELEGRAPH AVENUE

EXISTING BUILDING

LOADING DOCK

EQUIPMENT STORAGE

ASPHALT SURFACE

EXISTING FENCE

EXISTING BUILDING

(80.79)  
MW-1

80.7

80.9

80.6

MW-2  
(80.54)

MW-3  
(80.93)

Storm Sewer

SIDEWALK

6" Water Line




43RD STREET

Gas Line

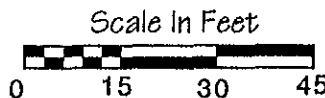
Storm Sewer

Former 1,000-Gallon Gasoline UST (489 43rd Street)

### Legend

- MW-2  - Existing Groundwater Monitoring Well
-  - Calculated Groundwater Flow Direction
-  - Calculated Groundwater Elevation Contour

Groundwater Elevation Data collected on May 30, 1996



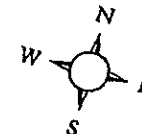
Title: **Gradient Map**  
**490 43rd Street**  
**Oakland, California**

Figure Number: **3**      Scale: **1" = 30"**

Drawn By: **JVC**      Date: **6/10/96**

Project Number: **6305-1.1**

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





WELL MONITORING WORKSHEET

---

JOB NAME:	PURGE METHOD: <u>Manual Railing</u>
SITE ADDRESS: <u>49043RD St., Oakland</u>	SAMPLED BY: <u>John C. &amp; Jeremy R.</u>
JOB #: <u>6305-1.1</u>	LABORATORY: <u>Chromalab</u>
DATE: <u>5/30/96</u>	ANALYSIS:
Onsite Drum Inventory SOIL:	MONITORING <input checked="" type="checkbox"/> DEVELOPING <input type="checkbox"/>
EMPTY: WATER: <u>1-100%, 1-70%</u>	SAMPLING <input checked="" type="checkbox"/>

	PURGE	HYDRA-READINGS			OBSERVATIONS
	VOLUME				
<b>WELL: MW-1</b>	(Gal)	pH	Temp. (F)	Cond. un/cm	<input type="checkbox"/> Froth
DEPTH OF BORING: <u>22.40</u>	<u>2.0</u>	<u>8.71</u>	<u>73.9</u>	<u>375</u>	<input type="checkbox"/> Sheen
DEPTH TO WATER: <u>10.23</u>	<u>4.0</u>	<u>8.23</u>	<u>74.0</u>	<u>381</u>	<input type="checkbox"/> Odor Type _____
WATER COLUMN: <u>12.17</u>	<u>6.0</u>	<u>8.11</u>	<u>73.7</u>	<u>376</u>	<input type="checkbox"/> Free Product
WELL DIAMETER: <u>2"</u>					Amount _____ Type _____
WELL VOLUME: <u>2.0 Gal</u>					<input type="checkbox"/> Other
COMMENTS:	↓				
	<u>8</u>	<u>8.10</u>	<u>73.6</u>	<u>375</u>	
<b>WELL: MW-2</b>	(Gal)	pH	Temp. (F)	Cond. un/cm	<input type="checkbox"/> Froth
DEPTH OF BORING: <u>21.13</u>	<u>1.8</u>	<u>7.98</u>	<u>70.3</u>	<u>587</u>	<input checked="" type="checkbox"/> Sheen
DEPTH TO WATER: <u>10.01</u>	<u>3.6</u>	<u>7.97</u>	<u>70.6</u>	<u>556</u>	<input checked="" type="checkbox"/> Odor Type <u>Paint Thinner</u>
WATER COLUMN: <u>11.12</u>	<u>5.4</u>	<u>8.06</u>	<u>70.4</u>	<u>594</u>	<input type="checkbox"/> Free Product
WELL DIAMETER: <u>2"</u>					Amount _____ Type _____
WELL VOLUME: <u>1.8 GAL</u>					<input type="checkbox"/> Other
COMMENTS:					
	<u>7.2</u>	<u>8.05</u>	<u>70.5</u>	<u>593</u>	
<b>WELL: MW-3</b>	(Gal)	pH	Temp. (F)	Cond. un/cm	<input type="checkbox"/> Froth
DEPTH OF BORING: <u>21.50</u>	<u>2.0</u>	<u>8.11</u>	<u>69.9</u>	<u>676</u>	<input checked="" type="checkbox"/> Sheen
DEPTH TO WATER: <u>9.97</u>	<u>4.0</u>	<u>8.15</u>	<u>70.6</u>	<u>523</u>	<input checked="" type="checkbox"/> Odor Type <u>Paint Thinner</u>
WATER COLUMN: <u>11.53</u>	<u>6.0</u>	<u>8.21</u>	<u>71.3</u>	<u>505</u>	<input type="checkbox"/> Free Product
WELL DIAMETER: <u>2"</u>					Amount _____ Type _____
WELL VOLUME: <u>2.0 GAL</u>					<input type="checkbox"/> Other
COMMENTS:					
	<u>8.0</u>	<u>8.20</u>	<u>72.2</u>	<u>502</u>	

ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD

# CHROMALAB, INC.

Environmental Services (SDB)

June 6, 1996

Submission #: 9605835

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD ST.  
Received: May 30, 1996

Project#: 6305-1.1

re: One sample for Gasoline and BTEX compounds analysis.  
Method: EPA 5030/8015M/8020

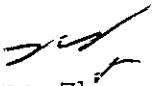
Client Sample ID: MW-2


Spl#: 86644  
Sampled: May 30, 1996

Matrix: WATER  
Run#: 1610

Analyzed: June 5, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	83.2	1
BENZENE	61	0.50	N.D.	113	1
TOLUENE	5.1	0.50	N.D.	112	1
ETHYL BENZENE	28	0.50	N.D.	108	1
XYLENES	11	0.50	N.D.	112	1
MTBE	N.D.	5.0	N.D.	92.0	1

  
June Zhao  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

June 6, 1996

Submission #: 9605835

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD ST.  
Received: May 30, 1996

Project#: 6305-1.1

re: One sample for Gasoline and BTEX compounds analysis.  
Method: EPA 5030/8015M/8020

Client Sample ID: MW-3

Spl#: 86645


Sampled: May 30, 1996

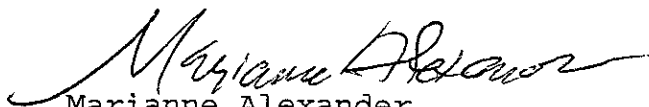
Matrix: WATER

Run#: 1610

Analyzed: June 5, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	83.2	1
BENZENE	65	0.50	N.D.	113	1
TOLUENE	1.5	0.50	N.D.	112	1
ETHYL BENZENE	9.0	0.50	N.D.	108	1
XYLENES	5.1	0.50	N.D.	112	1
MTBE	N.D.	5.0	N.D.	92.0	1

  
June Zhao  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

June 6, 1996

Submission #: 9605835

ACC ENVIRONMENTAL CONSULTANTS

Atten: David DeMent

Project: 490 43RD ST.  
Received: May 30, 1996

Project#: 6305-1.1


re: One sample for Gasoline and BTEX compounds analysis.  
Method: EPA 5030/8015M/8020


Client Sample ID: MW-1  
Spl#: 86643  
Sampled: May 30, 1996

Matrix: WATER  
Run#: 1610

Analyzed: June 5, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
GASOLINE	N.D.	50	N.D.	83.2	1
BENZENE	62	0.50	N.D.	113	1
TOLUENE	N.D.	0.50	N.D.	112	1
ETHYL BENZENE	16	0.50	N.D.	108	1
XYLENES	18	0.50	N.D.	112	1
MTBE	N.D.	5.0	N.D.	92.0	1

  
June Zhao  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

June 6, 1996

Submission #: 9605835

ACC ENVIRONMENTAL CONSULTANTS

Atten: D. Dement

Project: 490 43rd St.  
Received: May 30, 1996

Project #: 6305-1.1

re: Three samples for Paint Thinner analysis

Matrix: WATER  
Sampled: May 30, 1996  
Method: EPA 3510/8015M

Extracted: June 3, 1996  
Analyzed: June 6, 1996

Sample #	Client Sample ID	Paint Thinner ( $\mu\text{g/L}$ )
86643	MW-1	240

Note: For above sample, hydrocarbon reported is in the Paint Thinner range, and does not match ChromaLab's Paint Thinner standard. Result reported is estimated due to low surrogate recovery. Batch QA/QC were within control limits

Blank	N.D.
Blank Spike Recovery	79%
Reporting Limit	50

Note: Diesel was used as the spiking compound. Sample concentrations were quantified against the Diesel calibration.

Matrix: WATER  
Sampled: May 30, 1996  
Method: EPA 3510/8015M

Extracted: June 5, 1996  
Analyzed: June 6, 1996

Sample #	Client Sample ID	Paint Thinner ( $\mu\text{g/L}$ )
86644	MW-2	4400

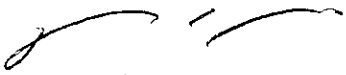
Note: For above sample, hydrocarbon reported is in the Paint Thinner range, and does not match ChromaLab's Paint Thinner standard.

86645	MW-3	2900
-------	------	------

Note: For above sample, hydrocarbon reported is in the Paint Thinner range, and does not match ChromaLab's Paint Thinner standard.

Blank	N.D.
Blank Spike Recovery	75%
Reporting Limit	50

Note: Diesel was used as the spiking compound. Sample concentrations were quantified against the Diesel calibration.

  
Dennis Mayugba  
Chemist

  
Alex Tam  
Semivolatiles Supervisor

# CHROMALAB, INC.

## SAMPLE RECEIPT CHECKLIST

Client Name ACC Date/Time Received 5/30/96 1129  
 Project 490 43<sup>RD</sup> ST. Received by B. Morrow Date / Time  
 Reference/Subm # 28038 / 9605835 Carrier name \_\_\_\_\_  
 Checklist completed by: Mimi Pak 5/31/96 Logged in by CR 5/30/96  
 Signature / Date Initials / Date  
 Matrix Water

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? 13.6°C  
 pH upon receipt ~7 pH adjusted <2 Check performed by: mp 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: The pH was adjusted for TPH paint thinner  
The VOA pH will be checked by the chemist.

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



835/86643-86645

SUBM #: 9605835 REP: FM  
CLIENT: ACC  
DUE: 06/06/96  
REF #: 28038

28038

# CHROMALAB, INC.

## Chain of Custody

DATE 5/30/96 PAGE 1 OF 1

Environmental Services (SDB) (DOHS 1094)

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

SAMPLERS (SIGNATURE) [Signature] (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)	TPH - Diesel, TPH (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)	MTBE	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (ICLP, STLC)	TPH AS PAINT THINNER	NUMBER OF CONTAINERS
MW-1	5/30/96	11AM	H <sub>2</sub> O	COOL/HCL	X	X										X						X	15
MW-2	"	12NO	"	"	X	X										X						X	5
MW-3	"	1pm	"	"	X	X										X						X	15

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NAME <u>490 43RD ST</u>	TOTAL NO. OF CONTAINERS <u>15</u>	HEAD SPACE	
PROJECT NUMBER <u>6305-1.1</u>	REC'D GOOD CONDITION/COLD	CONFORMS TO RECORD	
P.O. # <u>6305-1.1</u>			
TAT	STANDARD 5-DAY	24	48 72 OTHER

SPECIAL INSTRUCTIONS/COMMENTS:  
Samples will likely contain a mix of gasoline and paint thinner

RELINQUISHED BY 1	RELINQUISHED BY 2	RELINQUISHED BY 3
<u>[Signature]</u> (SIGNATURE) (TIME) <u>JOHN CONKLIN</u> (PRINTED NAME) (DATE) <u>ACC</u> (COMPANY)	<u>[Signature]</u> (SIGNATURE) (TIME) <u>[Signature]</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	<u>[Signature]</u> (SIGNATURE) (TIME) <u>[Signature]</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)
RECEIVED BY 1	RECEIVED BY 2	RECEIVED BY (LABORATORY) 3
<u>[Signature]</u> (SIGNATURE) (TIME) <u>[Signature]</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	<u>[Signature]</u> (SIGNATURE) (TIME) <u>[Signature]</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	<u>[Signature]</u> (SIGNATURE) (TIME) <u>Chris Rouley 5/30/96</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)