

January 6, 2000

Mr. John Ward  
Wells Fargo Trust  
Asset Management Division  
Trust Real Estate Department  
P.O. Box 63939  
San Francisco, California 94163

RE: Groundwater Monitoring Report  
Blumert Trust, 490 43rd Street, Oakland, California  
*ACC Project No. 96-6305-001.01*

Dear Mr. Ward:

The enclosed report summarizes results of groundwater monitoring at 490 43rd Street, Oakland, California, performed by ACC Environmental Consultants, Inc., (ACC) on December 20, 1999. The next groundwater sampling event is scheduled for June 2000.

On your behalf, ACC is forwarding a copy of this report to the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA).

If you have any comments regarding this report, please call me at (510) 638-8400.

Sincerely,



David R. DeMent, RG  
Senior Geologist

/drd:clm

Enclosures

cc: Mr. Kenneth Cheitlin, McShane, Schnack & Cheitlin  
Mr. Barney Chan, ACHCSA ✓

ENVIRONMENTAL  
PROTECTION  
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**GROUNDWATER MONITORING REPORT**

**490 43rd Street  
Oakland, California**

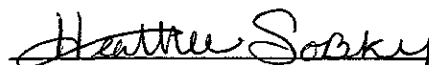
*ACC Project No. 96-6305-001.01*

Prepared for:


Mr. John Ward  
Wells Fargo Trust  
525 Market Street, 18th Floor  
San Francisco, California

January 6, 2000

Prepared by:

  
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Technical Editor

Reviewed by:

  
David R. DeMent, RG  
Senior Geologist

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**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, for the subject property at 490 43rd Street, Oakland, California (Figure 1). The work was conducted at the request of the Alameda County Health Care Services Agency, Department of Environmental Health (ACHCSA) for additional site investigation and characterization of impacted groundwater.

The purpose of the work was to monitor groundwater flow direction and gradient and to evaluate the presence of petroleum hydrocarbons in the local groundwater associated with former gasoline and paint thinner (mineral spirits) 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 2). The property is relatively flat, at an elevation of approximately 90 feet above mean sea level (MSL). The predominant groundwater flow direction is to the south-southwest.

The facility formerly operated one 1,000-gallon gasoline UST and one 350-gallon mineral spirits UST, which were removed on December 11, 1991. Laboratory analysis of soil samples collected underneath the gasoline UST indicated concentrations of 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 underneath the mineral spirit UST indicated concentrations up to 25 ppm mineral spirits. Groundwater was observed in the excavation at a depth of approximately 12.5 feet below ground surface (bgs). The tank pit, which formerly contained both USTs, was overexcavated on March 31, 1992, to remove additional impacted soil. Laboratory analysis of soil samples collected from excavation sidewalls indicated concentrations of up to 720 ppm TPHg, 30 ppm BTEX constituents, and 190 ppm mineral spirits.

Three groundwater monitoring wells were installed on April 12, 1993, by Kaprealian Engineering, Inc., (KEI) and have been monitored periodically since that time. Gradient was calculated at approximately 0.01 foot/foot and flow direction was to the south-southwest. Groundwater samples collected from the three monitoring wells indicated elevated TPHg and mineral spirit concentrations.

On June 1, 1994, KEI drilled exploratory soil borings EB1 and EB2. Concentrations of TPHg and mineral spirits ranging from 28 to 180 ppm were detected in soil samples collected from boring EB2 at depths of 10 and 12 feet bgs. Grab groundwater samples collected from borings EB1 and EB2 indicated concentrations of TPHg at 3,400 parts per billion (ppb) and 9,200 ppb, respectively.

and mineral spirits 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 and six additional exploratory borings (B3 through B8) upgradient and downgradient of the former USTs to characterize groundwater in the general vicinity of the former tank excavation. Concentrations of mineral spirits were detected in sample SB1-9.0 at 52 ppm and in sample SB2-9.0 at 78 ppm. Grab groundwater samples were collected from borings B3 through B8 and analyzed for TPHg, BTEX, and mineral spirits. Concentrations of TPHg ranged from nondetectable in groundwater samples collected from borings B3 and B8 to 46,000 ppb in a sample collected from boring B6. Concentrations of mineral spirits ranged from nondetectable in samples collected from borings B3 and B8 to 16,000 ppb in a sample from boring B7. Petroleum hydrocarbon impacts to shallow groundwater were not fully delineated, but concentrations of TPHg and mineral spirits appear to have migrated preferentially along utility trench lines. Field observations indicated that general aquifer quality was poor, and subsurface groundwater migration was believed to be minimal based on soil type, flat hydraulic gradient, and minimal surface water infiltration.

In a letter to Wells Fargo Bank dated October 17, 1996, ACHGSA approved biannual groundwater monitoring, the installation of one additional monitoring well, and evaluation of options to artificially introduce dissolved oxygen (DO) into shallow groundwater to assist natural degradation processes. In July 1999, one additional groundwater monitoring well was installed downgradient of the former USTs and ORC was introduced through a series of soil borings. Biannual groundwater monitoring and sampling has been conducted at the site since December 1996.

### **3.0 GROUNDWATER MONITORING AND SAMPLING**

ACC monitored and sampled wells MW-1 through MW-4 on December 20, 1999. This sampling event was performed to further characterize groundwater conditions at the site. Work at the site included measuring depth to water, subjectively evaluating groundwater in the wells, measuring groundwater parameters such as pH, temperature, conductivity, and DO, and purging and sampling the wells for laboratory analysis.

#### **3.1 Groundwater Monitoring**

Before groundwater sampling, the depth to the surface of the water table was measured from the top of the 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 as Appendix 1. Information regarding well elevations and groundwater levels is summarized in Table 1.

**TABLE 1 - GROUNDWATER MONITORING DATA**

Well Number (Well Elevation)	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
	09/03/96	12.10	78.92
	12/06/96	9.32	81.70
	06/12/97	11.85	79.17
	12/16/97	8.87	82.15
	06/19/98	10.77	80.25
	12/17/98	10.04	80.98
	06/22/99	11.60	79.42
12/20/99	11.26	79.76	
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
	09/03/96	11.87	78.68
	12/06/96	9.42	81.13
	06/12/97	11.65	78.90
	12/16/97	8.74	81.81
	06/19/98	10.49	80.06
	12/17/98	9.99	80.56
	06/22/99	11.74	78.81
12/20/99	11.46	79.09	
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
	09/03/96	12.40	78.50
	12/06/96	9.12	81.78
	06/12/97	11.86	79.04
	12/16/97	8.54	82.36
	06/19/98	10.66	80.24
	12/17/98	9.98	80.92
	06/22/99	11.76	79.14
12/20/99	11.50	79.40	

Well Number (Well Elevation)	Date	Depth to Water*	Groundwater Elevation
MW-4 (90.16')	12/20/99	12.28	77.80

Notes: \*Depth to water measured in feet below top of casing

### 3.2 Groundwater Gradient

The groundwater flow direction as determined from monitoring well data collected on December 20, 1999, is illustrated on Figure 3. Based on groundwater elevation calculations, groundwater flow is predominantly toward the south-southwest at an average gradient of 0.035 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
09/03/96	0.012	Southeast
12/06/96	0.036	Southwest
06/12/97	0.012	South-southwest
12/16/97	0.026	Southwest
06/19/98	0.010	Southwest
12 17/98	0.016	Southwest
06 22/99	0.026	Southwest
12 20/99	0.035*	South-southwest*

Notes: Gradient and flow direction calculated using data from wells MW-1, MW-2, and MW-3 only

### 3.3 Groundwater Sampling

Prior to groundwater sampling, each well was purged using a disposable polyethylene bailer. ACC measured pH, DO, conductivity, temperature, salinity, and turbidity during well purging. When these parameters stabilized and four well casing volumes of water had been removed from each well, groundwater samples were collected. Following purging, each well was allowed to recharge before sampling.

Each well was sampled using a new, disposable polyethylene bailer attached to new string. From each monitoring well, laboratory supplied sample vials and bottles were filled to overflowing and sealed so that no air was trapped in the vial or bottle. Once filled, vials were inverted and tapped to test for air bubbles. Sample containers were labeled with self-adhesive, pre-printed tags. All samples were stored in pre-chilled, insulated containers pending delivery to Chromalab Inc. (Chromalab), a state-certified laboratory, for analysis.

Water purged during the sampling of the monitoring wells is temporarily stored on site in Department of Transportation approved 55-gallon drums pending receipt of laboratory analytical results and proper disposal.

### 4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples collected from monitoring wells MW-1 through MW-4 were submitted to Chromalab following chain of custody protocol. The samples were analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE) using Method SW846 8020A Nov 1990/8015M, and total extractable petroleum hydrocarbons as mineral spirits (TEPH as mineral spirits) using EPA Method 8015M. Copies of the chain of custody record and laboratory analytical reports are included as Appendix 2. Groundwater sample analytical results are summarized in Table 3.



**TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Well / Date	Mineral Spirits (µg/L)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
<b>MW-1</b>							
04/29/93	600	290	31	1.9	2.7	5.4	--
12/13/93	820	1,700	170	22	19	48	--
03/15/94	1,200	2,100	250	12	27	38	--
06/16/94	430	700	35	6.8	8.7	10	--
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	<50	1,700 <sup>(1)</sup>	62	<0.5	16	18	<5
09/03/96	<50	570	1.8	0.61	8.5	7.3	<5
12/06/96	<51	2,600	84	2.8	30	23	--
06/12/97	<51	580	9.4	1.3	5.0	4.0	8.1
12/16/97	490 <sup>(4)</sup>	840	12	2.5	8.0	4.4	17
06/19/98	480	130	0.80	<0.50	1.8	0.52	<5.0
12/17/98	300 <sup>(4)</sup>	89	1.9	<0.50	<0.50	0.69	<5.0
06/22/99	<50	220	6.7	<0.50	4.5	<0.50	<5.0
12/20/99	<50	130	1.5	<0.50	0.71	<0.50	<5.0
<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	<50	10,000 <sup>(1)</sup>	61	5.1	28	11	<5 <sup>(2)</sup>
09/03/96	<50	7,400	960	19	130	37	<100 <sup>(2)</sup>
09/03/96 <sup>(3)</sup>	2,800	7,800	1,400	<0.5	210	91	300
12/06/96	<54	12,000	850	8	140	36	--
06/12/97	<50	5,100	810	25	6.8	13	<5
12/16/97	3,600 <sup>(4)</sup>	3,000	400	9.2	26	10	44
06/19/98	7,200	5,900	760	15	100	33	<25
12/17/98	3,400 <sup>(4)</sup>	7,300	850	33	200	22	<25
06/22/99	1,200	7,800	660	<10	140	<10	<100
12/20/99	4,600 <sup>(4)</sup>	9,400	650	24	92	21	<100

Well / Date	Mineral Spirits (µg/L)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
<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	<50	5,300 <sup>(1)</sup>	65	1.5	9.0	5.1	<5 <sup>(2)</sup>
09/03/96	<50	8,900	460	17	51	77	<25 <sup>(2)</sup>
09/03/96 <sup>(3)</sup>	7,100	4,800	800	14	39	39	120
12/06/96	<100	7,000	740	<5	60	17	--
06/12/97	<50	2,800	460	14	59	28	<50
12/16/97	4,000 <sup>(4)</sup>	4,900	1,700	17	52	20	92
06/19/98	10,000	3,800	470	19	49	21	<25
12/17/98	240 <sup>(4)</sup>	5,000	450	18	100	4.8	<25
06/22/99	790	3,100	190	<1.0	52	<1.0	<10
12/20/99	6,400 <sup>(4)</sup>	4,500	230	12	47	38	<100
<b>MW-4</b>							
06/22/99	1,900	3,200	410	<2.5	54	12	90
12/20/99	2,000 <sup>(4)</sup>	2,000	160	7.4	8.0	7.0	25

Notes: All water results are reported in µg/L, approximately equal to ppb

< = Not detected at laboratory reporting limit indicated

-- = Analysis not performed

<sup>(1)</sup> Value revised by Chromalab from May 1996, submission 9605835

<sup>(2)</sup> Confirmed by gas chromatography/mass spectrometry (GC/MS)

<sup>(3)</sup> Duplicate sample analysis by Sequoia Analytical

<sup>(4)</sup> Quantitation for this analyte is based on the response factor of diesel. Hydrocarbons reported do not match the pattern of the mineral spirit standard.

## 5.0 DISCUSSION

Groundwater gradient and flow direction were 0.035 foot/foot to the south-southwest in December 1999. These values are consistent with previous sampling events; however, seasonal variations in gradient and flow direction have been observed at the site.

Analytical results from the December 20, 1999 sampling event indicate that concentrations of TPHg and BTEX decreased in well MW-1 and mineral spirits were again not reported above the laboratory detection limit. Concentrations of mineral spirits, TPHg and the majority of BTEX constituents increased in downgradient wells MW-2 and MW-3. The concentration of mineral spirits increased slightly in well MW-4 since the initial sampling event in July 1999, and the TPHg concentration decreased. Concentrations of BTEX constituents also decreased, except for toluene, which showed a slight increase. MTBE was detected in well MW-4 only, at a concentration of 25 ppb. *at the well BTEX in MW-3 is <100 ppb*

Historical groundwater analytical results indicate generally decreasing concentrations of petroleum hydrocarbon constituents indicating that natural biodegradation processes are occurring. Dissolved-phase petroleum hydrocarbon concentrations mimic fluctuations in groundwater elevation. Since the monitoring wells are located in such close proximity to the former USTs, these fluctuations are observed in the wells during periodic monitoring events.

I don't  
see this

Levels of dissolved oxygen do not appear to have increased significantly since introduction of ORC in July 1999. The concentration of oxygen dissolved in groundwater generally reaches its peak approximately 12 months following introduction of ORC, and should be quantifiable by the next monitoring event, scheduled for June 2000.

Really

## 6.0 CONCLUSIONS

Based on historical data and analytical results of this sampling and monitoring event, ACC concludes the following:

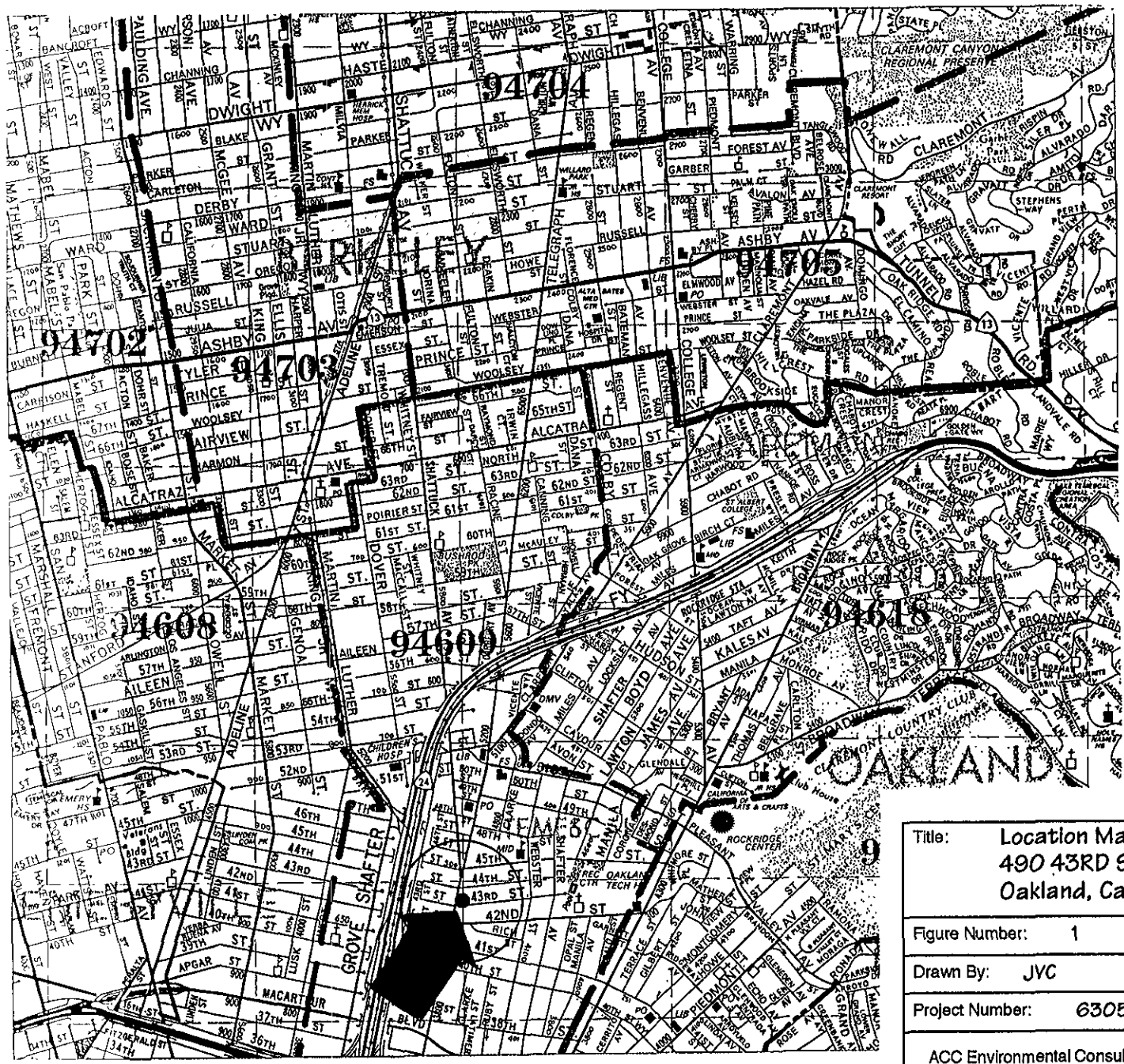
- Dissolved TPHg, BTEX, and mineral spirits continue to be detected in groundwater in the immediate vicinity of wells MW-1 through MW-3;
- Dissolved oxygen levels are consistent with previous measurements but are anticipated to increase by the next sampling event;
- Petroleum hydrocarbon concentrations are being slowly degraded through natural biodegradation processes with a measurable preference for BTEX constituents; and
- Groundwater flow direction and gradient were calculated to the southwest at 0.035 foot/foot which is consistent with previous sampling events.

## 7.0 RECOMMENDATIONS

Based on the analytical results and conclusions presented above, ACC recommends the following:

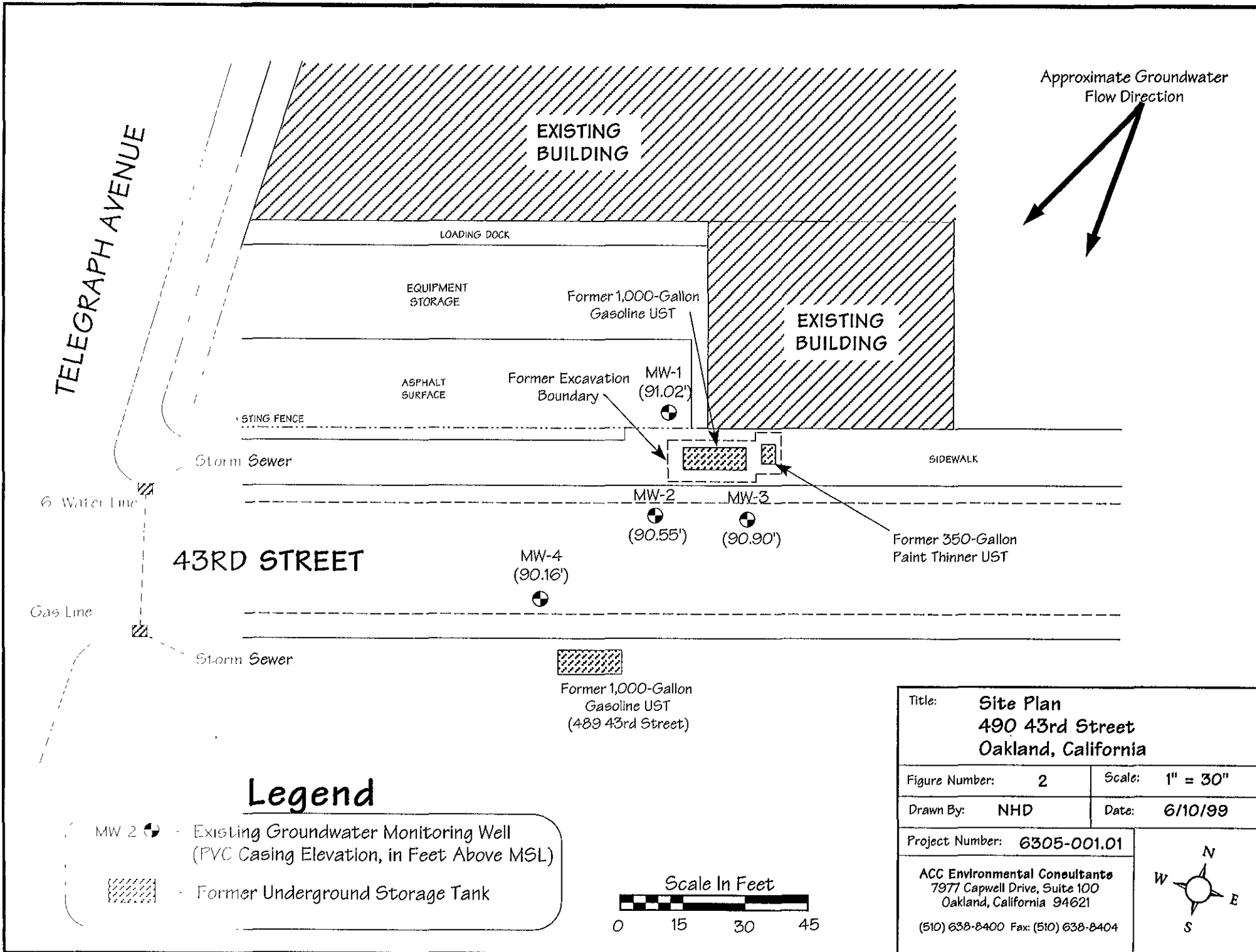
- Continue biannual groundwater monitoring at the subject site; and
- Continue to monitor levels of DO in groundwater to evaluate the effectiveness of ORC introduction

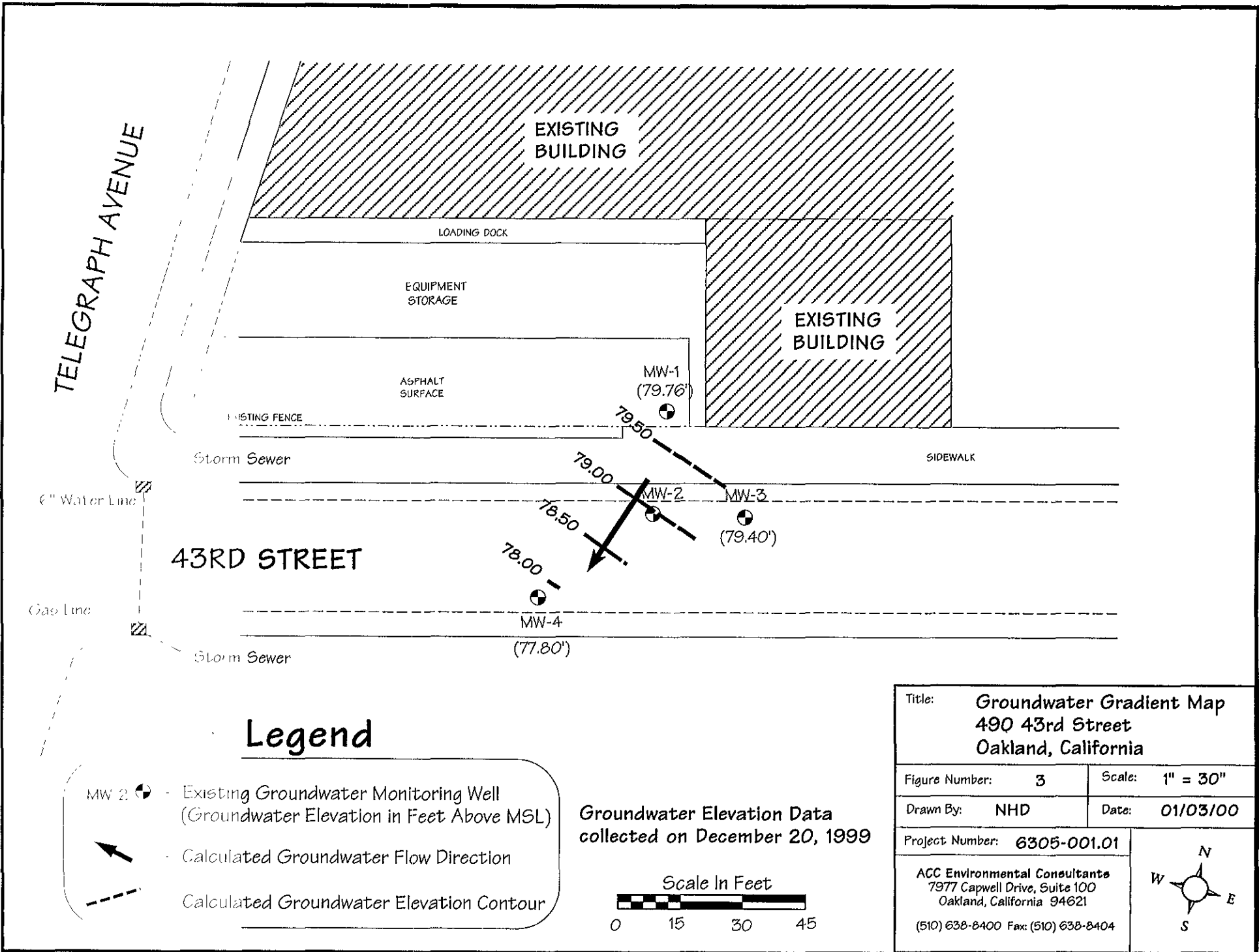
The next monitoring event is scheduled for June 2000






SOURCE: THOMAS BROTHERS GUIDE

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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	

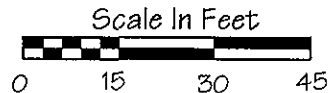


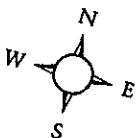


### Legend

- MW 2  Existing Groundwater Monitoring Well (Groundwater Elevation in Feet Above MSL)
-  Calculated Groundwater Flow Direction
-  Calculated Groundwater Elevation Contour

**Groundwater Elevation Data**  
collected on December 20, 1999



Title: <b>Groundwater Gradient Map</b> <b>490 43rd Street</b> <b>Oakland, California</b>	
Figure Number: <b>3</b>	Scale: <b>1" = 30"</b>
Drawn By: <b>NHD</b>	Date: <b>01/03/00</b>
Project Number: <b>6305-001.01</b>	
<b>ACC Environmental Consultants</b> 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	
	

WELL MONITORING WORKSHEET

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JOB NAME: <i>Blumert Paint Company</i>	PURGE METHOD: <i>Manual Bailing</i>
SITE ADDRESS: <i>490 43<sup>rd</sup> Street, Oakland</i>	SAMPLED BY: <i>Neil Doran</i>
JOB #: <i>6305-001.01</i>	LABORATORY: <i>Chromalab</i>
DATE: <i>12/20/99</i>	ANALYSIS: <i>TPH, BTEX, MTBE, TEPH</i>
Onsite Drum Inventory SOIL:	MONITORING <input checked="" type="checkbox"/> DEVELOPING <input type="checkbox"/>
EMPTY: <i>1</i> WATER: <i>1-40%</i>	SAMPLING <input checked="" type="checkbox"/>

	PURGE VOL.	PURGE WATER READINGS						OBSERVATIONS
	(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	
<b>WELL:</b> <i>MW-1</i>								<input type="checkbox"/> Froth
DEPTH OF BORING: <i>22.36'</i>	<i>1.8</i>	<i>6.13</i>	<i>19.0</i>	<i>0.465</i>	<i>0.01</i>	<i>115</i>	<i>1.00</i>	<input type="checkbox"/> Sheen
DEPTH TO WATER: <i>11.26'</i>	<i>3.6</i>	<i>6.31</i>	<i>19.1</i>	<i>0.452</i>	<i>0.01</i>	<i>450</i>	<i>0.86</i>	<input type="checkbox"/> Odor Type _____
WATER COLUMN: <i>11.10'</i>	<i>5.4</i>	<i>6.55</i>	<i>19.0</i>	<i>0.445</i>	<i>0.01</i>	<i>650</i>	<i>1.34</i>	<input type="checkbox"/> Free Product
WELL DIAMETER: <i>2"</i>	<i>7.2</i>	<i>6.54</i>	<i>19.2</i>	<i>0.450</i>	<i>0.01</i>	<i>670</i>	<i>1.35</i>	Amount _____ Type _____
WELL VOLUME: <i>1.8 gal</i>								<input type="checkbox"/> Other
COMMENTS: <i>...</i>								
<b>WELL:</b> <i>MW-2</i>								<input type="checkbox"/> Froth
DEPTH OF BORING: <i>21.16'</i>	<i>1.6</i>	<i>6.69</i>	<i>19.8</i>	<i>0.700</i>	<i>0.02</i>	<i>065</i>	<i>1.97</i>	<input checked="" type="checkbox"/> Sheen
DEPTH TO WATER: <i>11.46'</i>	<i>3.2</i>	<i>6.70</i>	<i>19.9</i>	<i>0.700</i>	<i>0.02</i>	<i>210</i>	<i>0.90</i>	<input checked="" type="checkbox"/> Odor Type <i>gas</i>
WATER COLUMN: <i>9.64'</i>	<i>4.8</i>	<i>6.77</i>	<i>20.0</i>	<i>0.680</i>	<i>0.02</i>	<i>390</i>	<i>1.23</i>	<input type="checkbox"/> Free Product
WELL DIAMETER: <i>2"</i>	<i>6.4</i>	<i>6.78</i>	<i>20.0</i>	<i>0.682</i>	<i>0.02</i>	<i>484</i>	<i>1.07</i>	Amount _____ Type _____
WELL VOLUME: <i>1.6 gal</i>								<input type="checkbox"/> Other
COMMENTS:								
<b>WELL:</b> <i>MW-3</i>								<input type="checkbox"/> Froth
DEPTH OF BORING: <i>21.50'</i>	<i>1.6</i>	<i>6.56</i>	<i>20.4</i>	<i>0.801</i>	<i>0.03</i>	<i>075</i>	<i>1.26</i>	<input type="checkbox"/> Sheen
DEPTH TO WATER: <i>11.50'</i>	<i>3.2</i>	<i>6.55</i>	<i>20.3</i>	<i>0.857</i>	<i>0.03</i>	<i>125</i>	<i>1.02</i>	<input type="checkbox"/> Odor Type _____
WATER COLUMN: <i>10.00'</i>	<i>4.8</i>	<i>6.62</i>	<i>20.1</i>	<i>0.850</i>	<i>0.03</i>	<i>190</i>	<i>1.46</i>	<input type="checkbox"/> Free Product
WELL DIAMETER: <i>2"</i>	<i>6.4</i>	<i>6.58</i>	<i>20.1</i>	<i>0.854</i>	<i>0.03</i>	<i>320</i>	<i>1.17</i>	Amount _____ Type _____
WELL VOLUME: <i>1.6 gal</i>								<input type="checkbox"/> Other
COMMENTS:								



JOB NAME: <i>Blomert Paint Company</i>	PURGE METHOD: <i>Manual Bailing</i>
SITE ADDRESS: <i>490 43<sup>rd</sup> Street</i>	SAMPLED BY: <i>Neil Doran</i>
JOB #: <i>6305-001.01</i>	LABORATORY: <i>Chromalab</i>
DATE: <i>12/20/99</i>	ANALYSIS: <i>TPH, BTEX, MTBE, TEPH</i>
Onsite Drum Inventory SOIL:	MONITORING <input checked="" type="checkbox"/> DEVELOPING <input type="checkbox"/>
EMPTY: WATER:	SAMPLING <input checked="" type="checkbox"/>

	PURGE	PURGE WATER READINGS						OBSERVATIONS
	VOL.	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	
<b>WELL:</b> <i>MW-4</i>	(Gal)							<input type="checkbox"/> Froth
DEPTH OF BORING: <i>19.92'</i>	<i>1.3</i>	<i>6.79</i>	<i>18.8</i>	<i>0.821</i>	<i>0.03</i>	<i>385</i>	<i>1.25</i>	<input type="checkbox"/> Sheen
DEPTH TO WATER: <i>12.28'</i>	<i>2.6</i>	<i>6.68</i>	<i>19.0</i>	<i>0.854</i>	<i>0.03</i>	<i>927</i>	<i>0.90</i>	<input type="checkbox"/> Odor Type _____
WATER COLUMN: <i>7.64'</i>	<i>3.9</i>	<i>6.71</i>	<i>18.6</i>	<i>0.847</i>	<i>0.03</i>	<i>710</i>	<i>1.35</i>	<input type="checkbox"/> Free Product
WELL DIAMETER: <i>2"</i>	<i>5.2</i>	<i>6.61</i>	<i>19.0</i>	<i>0.852</i>	<i>0.03</i>	<i>980</i>	<i>0.92</i>	Amount _____ Type _____
WELL VOLUME: <i>1.3 gal</i>								<input type="checkbox"/> Other
COMMENTS:								
<b>WELL:</b>	(Gal)							<input type="checkbox"/> Froth
DEPTH OF BORING:								<input type="checkbox"/> Sheen
DEPTH TO WATER:								<input type="checkbox"/> Odor Type _____
WATER COLUMN:								<input type="checkbox"/> Free Product
WELL DIAMETER:								Amount _____ Type _____
WELL VOLUME:								<input type="checkbox"/> Other
COMMENTS:								
<b>WELL:</b>	(Gal)							<input type="checkbox"/> Froth
DEPTH OF BORING:								<input type="checkbox"/> Sheen
DEPTH TO WATER:								<input type="checkbox"/> Odor Type _____
WATER COLUMN:								<input type="checkbox"/> Free Product
WELL DIAMETER:								Amount _____ Type _____
WELL VOLUME:								<input type="checkbox"/> Other
COMMENTS:								

ANALYTICAL RESULTS AND CHAIN OF CUSTODY RECORD

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-12-0352

Date: December 30, 1999

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**ACC Environmental Consultants**

7977 Capwell Drive, Suite 100  
Oakland, CA 94621

Attn.: Mr. Dave DeMent

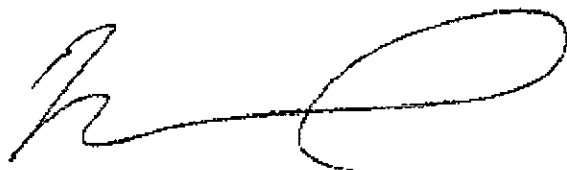
Project: 6305-001.01  
490 43rd Street

Dear Mr. DeMent,

Attached is our report for your samples received on Tuesday December 21, 1999. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after January 20, 2000 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919. You can also contact me via email. My email address is: [vvancil@chromalab.com](mailto:vvancil@chromalab.com)

Sincerely,



Vincent Vancil

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

## Total Extractable Petroleum Hydrocarbons (TEPH)

**ACC Environmental Consultants**✉ 7977 Capwell Drive, Suite 100  
Oakland, CA 94621

Attn: Dave DeMent

Phone: (510) 638-8400 Fax: (510) 638-8404

Project #: 6305-001.01

Project 490 43rd Street

**Samples Reported**

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	12/20/1999 09:35	1
MW-2	Water	12/20/1999 10:10	2
MW-3	Water	12/20/1999 10:40	3
MW-4	Water	12/20/1999 11:10	4

1220 Quarry Lane \* Pleasanton CA 94566-4756  
Telephone (925) 484-1919 \* Facsimile (925) 484-1096

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**

Test Method: 8015m

Attn.: Dave DeMent

Prep Method: 3510/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: <b>MW-1</b>	Lab Sample ID: <b>1999-12-0352-001</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 09:35	Extracted: 12/27/1999 09:00
Matrix: Water	QC-Batch: 1999/12/27-02.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral spirits	ND	50	ug/L	1.00	12/28/1999 19:31	
<i>Surrogate(s)</i> o-Terphenyl	86.0	60-130	%	1.00	12/28/1999 19:31	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**

Test Method: 8015m

Attn.: Dave DeMent

Prep Method: 3510/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: <b>MW-2</b>	Lab Sample ID: <b>1999-12-0352-002</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 10:10	Extracted: 12/27/1999 09:00
Matrix: Water	QC-Batch: 1999/12/27-02.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral spirits	4600	50	ug/L	1.00	12/28/1999 20:08	rd,nmsp
<i>Surrogate(s)</i> o-Terphenyl	103.9	60-130	%	1.00	12/28/1999 20:08	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**

Test Method: 8015m

Attn.: Dave DeMert

Prep Method: 3510/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: <b>MW-3</b>	Lab Sample ID: <b>1999-12-0352-003</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 10:40	Extracted: 12/27/1999 09:00
Matrix: Water	QC-Batch: 1999/12/27-02.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral spirits	6400	50	ug/L	1.00	12/28/1999 20:45	rd
<i>Surrogate(s)</i> o-Terphenyl	101.9	60-130	%	1.00	12/28/1999 20:45	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**

Test Method: 8015m

Attn.: Dave DeMert

Prep Method: 3510/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: <b>MW-4</b>	Lab Sample ID: <b>1999-12-0352-004</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 11:10	Extracted: 12/27/1999 09:00
Matrix: Water	QC-Batch: 1999/12/27-02.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral spirits	2000	53	ug/L	1.05	12/28/1999 21:21	rd,nmsp
<b>Surrogate(s)</b> o-Terphenyl	98.9	60-130	%	1.00	12/28/1999 21:21	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
 Telephone (925) 484-1919 \* Facsimile (925) 484-1096



**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**

Test Method: 8015m

Attn.: Dave DeMert

Prep Method: 3510/8015M

**Batch QC Report**

Total Extractable Petroleum Hydrocarbons (TEPH)

<b>Method Blank</b>	<b>Water</b>	<b>QC Batch # 1999/12/27-02.10</b>
MB: 1999/12/27-02.10-001		Date Extracted: 12/27/1999 08:00

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	12/27/1999 17:14	
Mineral spirits	ND	50	ug/L	12/27/1999 17:14	
<b>Surrogate(s)</b> o-Terphenyl	91.5	60-130	%	12/27/1999 17:14	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: ACC Environmental Consultants

Test Method: 8015m

Attn: Dave DeMent

Prep Method: 3510/8015M

**Batch QC Report**

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 1999/12/27-02.10
LCS: 1999/12/27-02.10-002	Extracted: 12/27/1999 08:00	Analyzed: 12/27/1999 19:03
LCSD: 1999/12/27-02.10-003	Extracted: 12/27/1999 08:00	Analyzed: 12/27/1999 19:40

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Diesel	1060	1120	1250	1250	84.8	89.6	5.5	60-130	25		
<b>Surrogate(s)</b>											
o-Terphenyl	13.4	17.9	20.0	20.0	67.0	89.5		60-130			

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**  
Attn: Dave DeMent

Test Method: 8015m  
Prep Method: 3510/8015M

## Legend & Notes

Total Extractable Petroleum Hydrocarbons (TEPH)

### Analysis Notes

MW-2 ( Lab# 1999-12-0352-002 )

nmsp= Hydrocarbons reported do not match our Mineral Spirits standard.

### Analyte Flags

rd

Quantitation for the above analyte is based on the response factor of Diesel

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

Gas/BTEX and MTBE

**ACC Environmental Consultants**✉ 7977 Capwell Drive, Suite 100  
Oakland, CA 94621

Attn: Dave DeMent

Phone: (510) 638-8400 Fax: (510) 638-8404

Project #: 6305-001.01

Project 490 43rd Street

**Samples Reported**

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	12/20/1999 09:35	1
MW-2	Water	12/20/1999 10:10	2
MW-3	Water	12/20/1999 10:40	3
MW-4	Water	12/20/1999 11:10	4

1220 Quarry Lane \* Pleasanton CA 94566-4756  
Telephone (925) 484-1919 \* Facsimile (925) 484-1096

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: **8020**  
8015M

Attn.: Dave DeMent

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: <b>MW-1</b>	Lab Sample ID: <b>1999-12-0352-001</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 09:35	Extracted: 12/28/1999 17:19
Matrix: Water	QC-Batch: 1999/12/28-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	130	50	ug/L	1.00	12/28/1999 17:19	
Benzene	1.5	0.50	ug/L	1.00	12/28/1999 17:19	
Toluene	ND	0.50	ug/L	1.00	12/28/1999 17:19	
Ethyl benzene	0.71	0.50	ug/L	1.00	12/28/1999 17:19	
Xylene(s)	ND	0.50	ug/L	1.00	12/28/1999 17:19	
MTBE	ND	5.0	ug/L	1.00	12/28/1999 17:19	
<b>Surrogate(s)</b>						
Trifluorotoluene	82.1	58-124	%	1.00	12/28/1999 17:19	
4-Bromofluorobenzene-FID	70.1	50-150	%	1.00	12/28/1999 17:19	

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**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: 8020  
8015M

Attn.: Dave DeMent

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: <b>MW-2</b>	Lab Sample ID: <b>1999-12-0352-002</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 10:10	Extracted: 12/28/1999 17:47
Matrix: Water	QC-Batch: 1999/12/28-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	9400	1000	ug/L	20.00	12/28/1999 17:47	
Benzene	650	10	ug/L	20.00	12/28/1999 17:47	
Toluene	24	10	ug/L	20.00	12/28/1999 17:47	
Ethyl benzene	92	10	ug/L	20.00	12/28/1999 17:47	
Xylene(s)	21	10	ug/L	20.00	12/28/1999 17:47	
MTBE	ND	100	ug/L	20.00	12/28/1999 17:47	
<b>Surrogate(s)</b>						
Trifluorotoluene	69.8	58-124	%	1.00	12/28/1999 17:47	
4-Bromofluorobenzene-FID	79.3	50-150	%	1.00	12/28/1999 17:47	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: 8020  
8015M

Attn.: Dave DeMent

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: <b>MW-3</b>	Lab Sample ID: <b>1999-12-0352-003</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 10:40	Extracted: 12/29/1999 15:58
Matrix: Water	QC-Batch: 1999/12/28-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	4500	1000	ug/L	20.00	12/29/1999 15:58	
Benzene	230	10	ug/L	20.00	12/29/1999 15:58	
Toluene	12	10	ug/L	20.00	12/29/1999 15:58	
Ethyl benzene	47	10	ug/L	20.00	12/29/1999 15:58	
Xylene(s)	38	10	ug/L	20.00	12/29/1999 15:58	
MTBE	ND	100	ug/L	20.00	12/29/1999 15:58	
<b>Surrogate(s)</b>						
Trifluorotoluene	92.4	58-124	%	1.00	12/29/1999 15:58	
4-Bromofluorobenzene-FID	73.6	50-150	%	1.00	12/29/1999 15:58	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: 8020  
8015M

Attn.: Dave DeMent

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: <b>MW-4</b>	Lab Sample ID: <b>1999-12-0352-004</b>
Project: 6305-001.01 490 43rd Street	Received: 12/21/1999 11:45
Sampled: 12/20/1999 11:10	Extracted: 12/29/1999 17:19
Matrix: Water	QC-Batch: 1999/12/29-01.04

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	2000	50	ug/L	1.00	12/29/1999 17:19	
Benzene	160	0.50	ug/L	1.00	12/29/1999 17:19	
Toluene	7.4	0.50	ug/L	1.00	12/29/1999 17:19	
Ethyl benzene	8.0	0.50	ug/L	1.00	12/29/1999 17:19	
Xylene(s)	7.0	0.50	ug/L	1.00	12/29/1999 17:19	
MTBE	25	5.0	ug/L	1.00	12/29/1999 17:19	
<b>Surrogate(s)</b>						
Trifluorotoluene	97.8	58-124	%	1.00	12/29/1999 17:19	
4-Bromofluorobenzene-FID	73.4	50-150	%	1.00	12/29/1999 17:19	



**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: 8020  
8015M

Attn.: Dave DeMent

Prep Method: 5030

**Batch QC Report**  
Gas/BTEX and MTBE

<b>Method Blank</b>	<b>Water</b>	<b>QC Batch # 1999/12/28-01.01</b>
MB: 1999/12/28-01.01-001		Date Extracted: 12/28/1999 10:26

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	12/28/1999 10:26	
Benzene	ND	0.5	ug/L	12/28/1999 10:26	
Toluene	ND	0.5	ug/L	12/28/1999 10:26	
Ethyl benzene	ND	0.5	ug/L	12/28/1999 10:26	
Xylene(s)	ND	0.5	ug/L	12/28/1999 10:26	
MTBE	ND	5.0	ug/L	12/28/1999 10:26	
<b>Surrogate(s)</b>					
Trifluorotoluene	109.0	58-124	%	12/28/1999 10:26	
4-Bromofluorobenzene-FID	68.2	50-150	%	12/28/1999 10:26	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: ACC Environmental Consultants

Test Method: 8020

Attn.: Dave DeMent

8015M

Prep Method: 5030

**Batch QC Report**  
Gas/BTEX and MTBE

Method Blank

Water

QC Batch # 1999/12/29-01.04

MB: 1999/12/29-01.04-001

Date Extracted: 12/29/1999 13:14

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	12/29/1999 13:14	
Benzene	ND	0.5	ug/L	12/29/1999 13:14	
Toluene	ND	0.5	ug/L	12/29/1999 13:14	
Ethyl benzene	ND	0.5	ug/L	12/29/1999 13:14	
Xylene(s)	ND	0.5	ug/L	12/29/1999 13:14	
MTBE	ND	5.0	ug/L	12/29/1999 13:14	
<b>Surrogate(s)</b>					
Trifluorotoluene	92.6	58-124	%	12/29/1999 13:14	
4-Bromofluorobenzene-FID	81.4	50-150	%	12/29/1999 13:14	

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: 8020  
8015M

Attn: Dave DeMent

Prep Method: 5030

**Batch QC Report**

Gas/BTEX and MTBE

**Laboratory Control Spike (LCS/LCSD)****Water****QC Batch # 1999/12/28-01.01**

LCS: 1999/12/28-01.01-002

Extracted: 12/28/1999 07:55

Analyzed: 12/28/1999 07:55

LCSD: 1999/12/28-01.01-003

Extracted: 12/28/1999 08:23

Analyzed: 12/28/1999 08:23

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	555	597	500	500	111.0	119.4	7.3	75-125	20		
Benzene	99.6	97.1	100.0	100.0	99.6	97.1	2.5	77-123	20		
Toluene	101	98.3	100.0	100.0	101.0	98.3	2.7	78-122	20		
Ethyl benzene	106	103	100.0	100.0	106.0	103.0	2.9	70-130	20		
Xylene(s)	302	293	300	300	100.7	97.7	3.0	75-125	20		
<b>Surrogate(s)</b>											
Trifluorotoluene	539	542	500	500	107.8	108.4		58-124			
4-Bromofluorobenzene-FI	365	386	500	500	73.0	77.2		50-150			

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone (925) 484-1919 \* Facsimile (925) 484-1096

**CHROMALAB, INC.**

Environmental Services (SDB)

Submission #: 1999-12-0352

To: **ACC Environmental Consultants**Test Method: 8020  
8015M

Attn: Dave DeMent

Prep Method: 5030

**Batch QC Report**

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 1999/12/29-01.04	
LCS:	1999/12/29-01.04-002	Extracted:	12/29/1999 13:42	Analyzed:	12/29/1999 13:42
LCSD:	1999/12/29-01.04-003	Extracted:	12/29/1999 14:09	Analyzed:	12/29/1999 14:09

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	559	566	500	500	111.8	113.2	1.2	75-125	20		
Benzene	95.5	83.4	100.0	100.0	95.5	83.4	13.5	77-123	20		
Toluene	94.6	83.1	100.0	100.0	94.6	83.1	12.9	78-122	20		
Ethyl benzene	89.3	78.5	100.0	100.0	89.3	78.5	12.9	70-130	20		
Xylene(s)	270	238	300	300	90.0	79.3	12.6	75-125	20		
<b>Surrogate(s)</b>											
Trifluorotoluene	437	390	500	500	87.4	78.0		58-124			
4-Bromofluorobenzene-FI	425	432	500	500	85.0	86.4		50-150			

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