

HAZARDOUS
MATERIALS
SECTION
JUL 15 1994

December 30, 1994

Mr. Steve Chrissanthos
Alameda Cellars
1702 Lincoln Avenue
Alameda, CA 94501

RE: Results of Quarterly Groundwater Sampling at
2425 Encinal, Alameda, California

Dear Mr. Chrissanthos:

Thank you for providing ACC with the opportunity to present this report. The enclosed report describes the materials and procedures used during the quarterly groundwater investigation performed at 2425 Encinal, Alameda, California. This work was performed to evaluate the vertical extent of groundwater impact.

Analysis of the groundwater samples from monitoring wells MW-1, MW-2, MW-3, and MW-4 indicated elevated concentrations of hydrocarbons. Analytical results of groundwater samples from monitoring wells MW-5 and MW-6 indicated below detectable levels of constituents indicating a lateral extent of groundwater impact.

If you have any comments regarding this report, please call me.

Sincerely,

Misty C. Kaltreider
Geologist

cc: Ms. Juliet Shin - Alameda County Health Care Services - Division of
Hazardous Materials

QUARTERLY GROUNDWATER INVESTIGATION

2425 ENCINAL
ALAMEDA, CALIFORNIA

Job Number 6039-5

December 1994

Prepared for:
Mr. Steve Chrissanthos
Alameda Cellars
1702 Lincoln Avenue
Alameda, CA 94501

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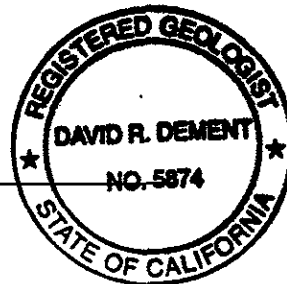


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1.0 INTRODUCTION

This report presents the procedures and findings of the quarterly groundwater investigation conducted by ACC Environmental Consultants, Inc., (ACC) on behalf of Mr. Steve Chrissanthos and Alameda Cellars, site owner at 2425 Encinal, Alameda, California. The project objective, as described in the Work Plan prepared on November 5, 1993, was to evaluate the extent of groundwater impact from the previous underground storage of gasoline.

2.0 BACKGROUND

The site is presently occupied by Alameda Cellars, a commercial liquor store. In March, 1990, two 10,000-gallon gasoline tanks were removed from the above referenced site. Analysis of the soil samples collected from beneath the two gasoline tanks indicated up to 710 parts per million (ppm) of Total Petroleum Hydrocarbons (TPH) as gasoline. Soil samples collected from beneath the diesel tank indicated less than detectable levels of TPH as diesel.

In December 1992, five borings were drilled onsite. Three of the borings were converted into monitoring wells MW-1, MW-2a, and MW-3. Analytical results of the soil collected during drilling and soil sampling indicated a maximum soil concentration of Total Petroleum Hydrocarbons (TPH) as gasoline as 1,365 ppm. Benzene concentration was 18.9 ppm in the same sample.

Initial groundwater samples collected in January, 1993, from the monitoring wells indicated a maximum TPH-gasoline concentration of 5,680 ppb (MW-2a) and a maximum benzene concentration of 1,560 ppb (MW-1).

Additional soil investigation was conducted in May, 1993 to evaluate the extent of contamination in the soil and groundwater. Findings of the additional investigation indicated the lateral extent of hydrocarbon impacted soil did not appear to extend beyond the property boundaries along the northern, western, and eastern sides. However, along the southern side, the impacted soil appears to extend into Park and Encinal Avenues. Field observations made during the additional investigation and soil sample analysis indicated the soil hydrocarbon plume is primarily around the former tank excavation and the former dispenser island. The vertical limit of hydrocarbons in the soil is estimated to occur at the present groundwater table.

Analysis of "grab" groundwater samples collected from borings drilled during the additional investigation indicate the residual hydrocarbons from the former tank excavation and dispenser island is migrating off-site via the groundwater.

This preliminary Site Assessment was conducted to further evaluate the groundwater contamination from a gasoline release onsite according request of Alameda County Health Care Services - Hazardous Materials Division.

In December 1993, three additional monitoring wells (MW-4, MW-5, and MW-6) were installed to further evaluate the extent of hydrocarbon groundwater impact. Laboratory analysis of the soil collected from each boring indicated below detectable levels of constituents which verifies the lateral extent of soil impact.

Laboratory analysis of the groundwater samples collected from monitoring well MW-5 and MW-6 indicated below detectable levels of constituents evaluated. The groundwater results indicated a lateral extent of groundwater impact. Laboratory analysis of groundwater collected from monitoring well MW-4 indicated detectable levels of constituents. Constituents reported from monitoring well MW-4 are low when compared with reported levels in monitoring wells MW-1,

MW-2a, and MW-3. The location of the southern edge of the groundwater impact is just off-site to the south. This "cross" gradient movement is attributed to the relatively flat gradient and possible recharge into the excavated area.

3.0 FIELD PROCEDURES

3.1 Groundwater Sampling

Groundwater samples were collected on December 7, 1994 from monitoring wells MW-1, MW-2a, MW-3, MW-4, and MW-5. Monitoring well MW-6 was inaccessible and subsequently sampled on December 13, 1994. Prior to groundwater sampling, the depth to the surface of the water table was measured from the top of the PVC casing using a Solinst Water Level Meter. Information regarding well elevations and groundwater level measurements are summarized in Table 1.

TABLE 1 - Groundwater Depth Information

<u>Date Sampled</u>	<u>Depth to Groundwater (Ft.)</u>	<u>Groundwater Elevation (Ft.)</u>
<u>Well No. MW-1</u>	<u>Elevation of Top of Casing-27.61 MSL</u>	
01/09/93	6.75	20.86
02/09/93	6.41	21.20
03/10/93	6.34	21.27
04/12/93	6.52	21.09
05/17/93	7.38	20.23
06/28/93	8.42	19.19
07/13/93	8.68	18.93
08/10/93	8.25	19.36
09/10/93	8.73	18.88
10/12/93	9.04	18.57
12/20/93	7.87	19.74
03/18/94	6.96	20.65
04/08/94	7.69	19.92
06/22/94	8.55	19.06
12/07/94	6.92	20.69
<u>Well No. MW-2a</u>	<u>Elevation of Top of Casing-27.98 MSL</u>	
01/09/93	7.06	20.92
02/09/93	6.63	21.35
03/10/93	6.57	21.41
04/12/93	6.77	21.21
05/17/93	7.61	20.37
06/28/93	8.68	19.30
07/13/93	8.94	19.04
08/10/93	8.66	19.32
09/10/93	8.95	19.03
10/12/93	9.36	18.62
12/20/93	8.24	19.74
03/18/94	7.80	20.18
04/08/94	7.67	20.31
06/22/94	7.82	20.16
12/07/94	7.23	20.75

TABLE 1 - Groundwater Depth Information, cont.

<u>Date Sampled</u>	<u>Depth to Groundwater (Ft.)</u>	<u>Groundwater Elevation (Ft.)</u>
<u>Well No. MW-3</u>	Elevation of Top of Casing-27.89 MSL	
01/09/93	6.68	21.21
02/09/93	6.25	21.64
03/10/93	6.18	21.71
04/12/93	6.41	21.48
05/17/93	7.37	20.52
06/28/93	8.47	19.42
07/13/93	8.74	19.15
08/10/93	8.45	19.44
09/10/93	8.52	19.37
10/12/93	9.20	18.69
12/20/93	7.95	19.94
03/18/94	6.60	21.29
04/08/94	7.70	20.19
06/22/94	8.62	19.27
12/07/94	6.92	20.97
<u>Well No. MW-4</u>	Elevation of Top of Casing-26.97 MSL	
12/20/93	7.25	19.72
03/18/94	6.64	20.33
04/08/94	7.12	19.85
06/22/94	7.96	19.01
12/07/94	6.32	20.65
<u>Well No. MW-5</u>	Elevation of Top of Casing-27.34 MSL	
12/20/93	8.01	19.33
03/18/94	7.80	19.54
04/08/94	7.82	19.52
06/22/94	8.51	18.83
12/07/94	7.08	20.26
<u>Well No. MW-6</u>	Elevation of Top of Casing-28.03 MSL	
12/20/93	8.00	20.03
03/18/94	----	----
04/08/94	7.72	20.31
06/22/94	8.68	19.35
12/07/94	----	----
12/13/94	6.73	21.30

Notes: All measurements in feet
MSL = Mean Sea Level

After water-level measurements were collected, each onsite well was purged by hand using a designated disposable Teflon 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. Worksheets of conditions monitored during purging are attached in Appendix A.

After the groundwater level had recovered to a minimum of approximately 80 percent of its static level, water samples were obtained using designated disposable Teflon bailers. Two 40 ml VOA vials, without headspace, were filled from the water collected from each monitoring well. The samples were preserved on ice and submitted to Chromalab Inc. under chain of custody protocol. Laboratory results with chain of custody forms are attached in Appendix B.

4.0 FINDINGS

4.1 Analytical Results - Groundwater

One groundwater sample each, from monitoring wells MW-1, MW-2a, MW-3, MW-4, MW-5, and MW-6, was collected and submitted for analysis for TPH as gasoline by EPA test method 5030 and BTEX by EPA test method 602. Analysis results from the groundwater samples are summarized in Table 2 and Figure 2. Analytical results are attached in Appendix B.

TABLE 2 - Analytical Results - Groundwater

Well Number	Date Collected	TPH-gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)
MW-1	01/09/93	5,360	1,560.0	1,026.6	641.0	2,706.2
	04/12/93	12,000	750.0	100.0	500.0	1,400.0
	07/13/93	720	119.6	32.7	70.8	262.0
	10/12/93	8,400	420.0	39.0	280.0	880.0
	12/20/93	5,200	270.0	58.0	170.0	590.0
	03/18/94	18,000	570.0	180.0	270.0	1,500.0
	04/08/94	NT	NT	NT	NT	NT
	06/22/94	4,800	160.0	56.0	130.0	310.0
	12/07/94	9,100	530.0	200.0	350.0	1,300.0
MW-2a	01/09/93	5,680	801.6	598.6	840.2	2,196.1
	04/12/93	12,000	460.0	110.0	240.0	1,600.0
	07/13/93	550	145.2	47.5	126.8	127.4
	10/12/93	2,000	280.0	17.0	100.0	120.0
	12/20/93	3,300	450.0	40.0	200.0	350.0
	03/18/94	7,900	370.0	53.0	190.0	530.0
	04/08/94	NT	NT	NT	NT	NT
	06/22/94	3,800	420.0	37.0	140.0	290.0
	12/07/94	6,800	640.0	100.0	370.0	950.0
MW-3	01/09/93	< 50	< 0.5	< 0.5	< 0.5	< 0.5
	04/12/93	1,500	95.0	30.0	46.0	85.0
	07/13/93	540	18.3	106.2	75.7	128.0
	10/12/93	3,500	290.0	230.0	210.0	460.0
	12/20/93	690	31.0	10.0	31.0	25.0
	03/18/94	450	9.6	11.0	5.5	23.0
	04/08/94	NT	NT	NT	NT	NT
	06/22/94	2,500	150.0	130.0	81.0	280.0
	12/07/94	420	16.0	8.3	26.0	37.0

TABLE 2 - Analytical Results - Groundwater, cont.

<u>Well Number</u>	<u>Date Collected</u>	<u>TPH-gasoline (ug/L)</u>	<u>Benzene (ug/L)</u>	<u>Toluene (ug/L)</u>	<u>Ethylbenzene (ug/L)</u>	<u>Xylenes (ug/L)</u>
MW-4	12/20/93	580	2.3	<0.5	1.4	1.1
	03/18/94	2,100	11.0	1.5	2.3	6.0
	04/08/94	NT	NT	NT	NT	NT
	06/22/94	1,600	39.0	7.5	13.0	16.0
	12/07/94	2,100	82.0	9.6	4.7	14.0
MW-5	12/20/93	<50	<0.5	<0.5	<0.5	<0.5
	03/18/94	<50	<0.5	<0.5	<0.5	<0.5
	04/08/94	NT	NT	NT	NT	NT
	06/22/94	<50	<0.5	<0.5	<0.5	<0.5
	12/07/94	<50	<0.5	<0.5	<0.5	<0.5
MW-6	12/20/93	<50	<0.5	<0.5	<0.5	<0.5
	03/18/94	NT	NT	NT	NT	NT
	04/08/94	<50	<0.5	<0.5	<0.5	<0.5
	06/22/94	<50	<0.5	<0.5	<0.5	<0.5
	12/13/94	<50	<0.5	<0.5	<0.5	<0.5

Notes: ug/L = parts per billion (ppb)
 NT = Not Tested

4.2 Groundwater Gradient

Prior to calculating the groundwater gradient, elevations for the onsite monitoring wells were surveyed by Ron Archer Civil Engineer, Inc. to an accuracy of one-hundredth of a foot. The well elevation was surveyed at the top of the PVC well casing. The elevations of the monitoring wells were established relative to a nearby benchmark located in the curb on the northwest corner of the intersection of Park and Encinal Avenues in Alameda, California.

The groundwater gradient was calculated using the onsite monitoring wells. The location of the wells is shown on Figure 1 - Site Plan. Groundwater elevations were collected from monitoring wells MW-1, MW-2a, MW-3, MW-4, and MW-5 on December 7, 1994 (illustrated in Figure 2). The gradient was evaluated by triangulation using the elevation of the potentiometric surface measured with respect to Mean Sea Level datum.

The historical groundwater gradient and the direction of groundwater flow onsite is summarized in Table 3.

TABLE 3 - Historic Groundwater Gradient

<u>Date Monitored</u>	<u>Gradient (foot/foot)</u>	<u>Direction</u>
01/09/93	0.009	west
02/09/93	0.013	southwest
03/10/93	0.012	west/southwest
04/12/93	0.012	west/southwest

TABLE 3 - Historic Groundwater Gradient, cont.

<u>Date Monitored</u>	<u>Gradient (foot/foot)</u>	<u>Direction</u>
05/17/93	0.008	south/southwest
06/28/93	0.008	southwest
07/13/93	0.008	southwest
08/10/93	0.004	west
09/10/93	0.015	southwest
10/12/93	0.004	southwest
12/20/93	0.008	west
03/18/94	0.018	west
04/08/94	0.011	west
06/22/94	0.027	south/southwest
12/07/94	0.008 (average)	west/southwest

5.0 CONCLUSION

The data and observations discussed herein indicate that groundwater has been impacted due to an unauthorized hydrocarbon release. The analytical parameters used for soil and groundwater sampling performed were in accordance with the guidance document "Tri-Regional Water Quality Control Boards Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites", dated August 10, 1990, for gasoline tanks.

First quarter sampling and analysis indicated elevated levels of TPH as gasoline with BTEX in the groundwater from monitoring well MW-1 and MW-2a. Groundwater from monitoring well MW-3 has below detectable levels of constituents. Second quarterly sampling and analysis of the groundwater in April, 1993 indicated an increase in levels of Total Petroleum Hydrocarbons as gasoline in all wells, however, the benzene, toluene, ethylbenzene and xylenes levels have declined in water samples from monitoring wells MW-1 and MW-2a. Constituents detected during July 1993 appear decreasing due to the fluctuating groundwater elevation. During October 1993 sampling, constituents in monitoring wells MW-1 and MW-3 have increased while only TPH as gasoline and benzene have increased in monitoring well MW-2a. Benzene increase in MW-2a is probably due to residual drainage and the well's close proximity to the former tank location and/or hydrocarbon desorption from sediment.

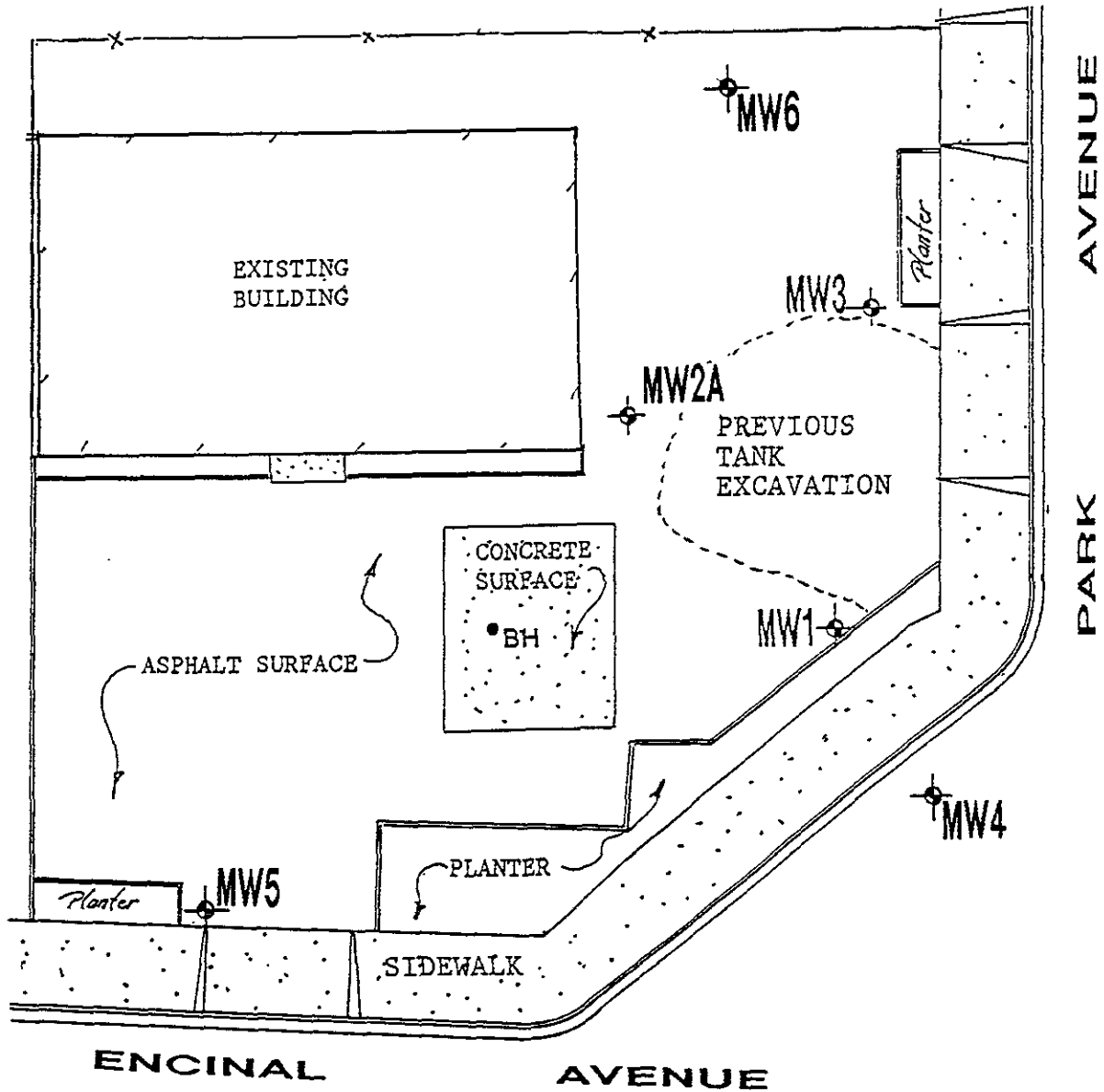
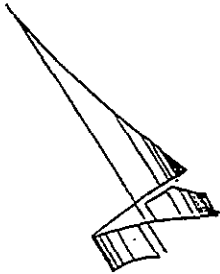
Three additional monitoring wells (MW-4, MW-5, and MW-6) were installed to evaluate the extent of groundwater impact plume. Laboratory analysis of the soil collected from each boring indicated below detectable levels of constituents which verifies the lateral extent of soil impact.

Laboratory analysis of the groundwater samples collected from monitoring wells MW-5 and MW-6 in January, March, April, June, and December, 1994 indicated below detectable levels of constituents evaluated. The groundwater results reported indicate a lateral extent of groundwater impact. Laboratory analysis of groundwater collected from monitoring well MW-4 indicated detectable levels of constituents.

The location of the southern edge of the groundwater contaminant plume appears to be just offsite to the south from evidence of laboratory results from groundwater collected from monitoring well MW-4. This "side" gradient movement is attributed to the relatively flat gradient and possible recharge into the excavated area causing fluctuating lateral movement. However, the data observed to date indicates that constituent movement is minimal.

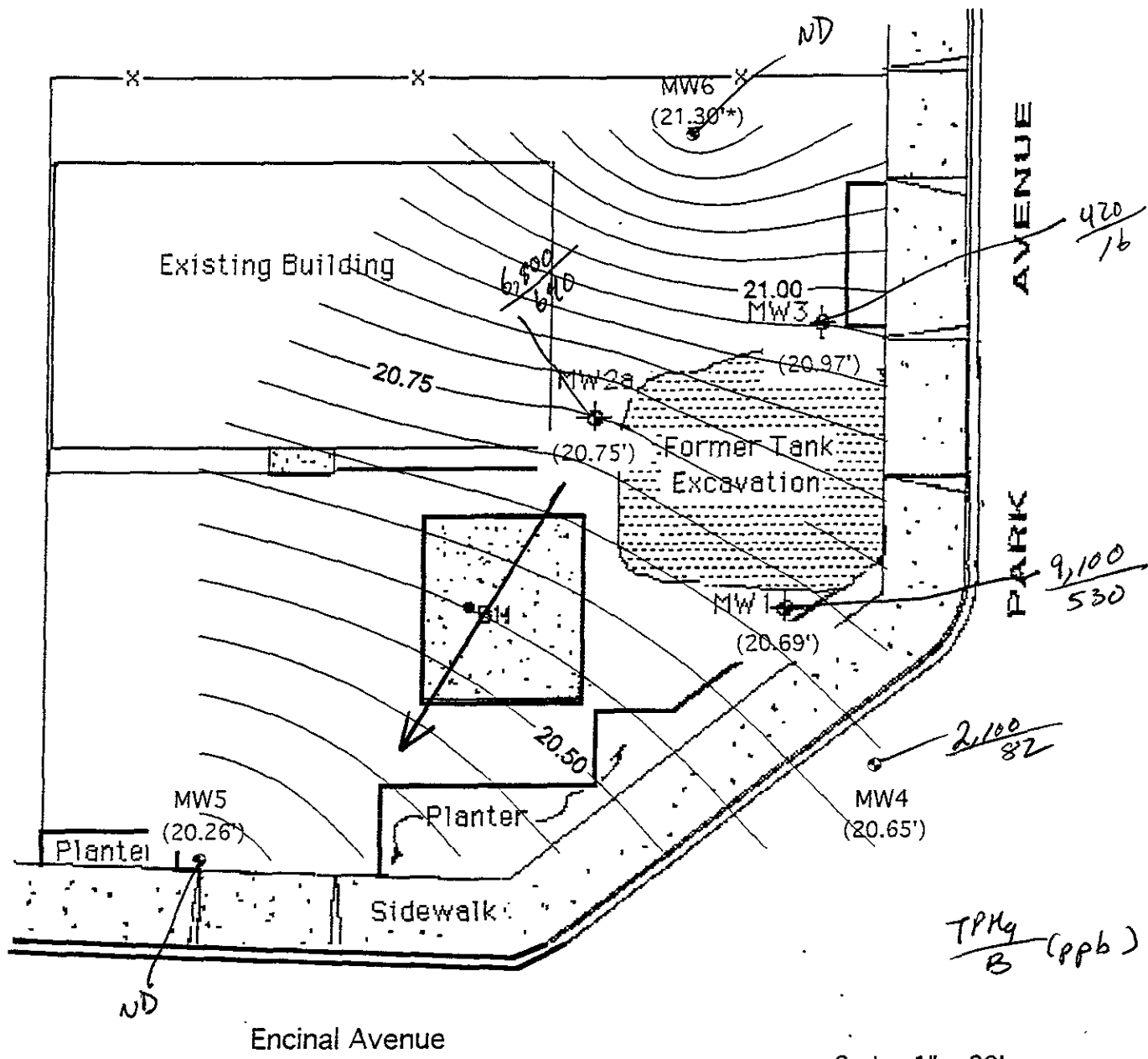
6.0 RECOMMENDATIONS

Pursuant to the Tri-Regional Board guidelines, groundwater sampling and monitoring of the onsite wells should continue on a quarterly basis.



Scale: 1" = 20'

Project # 6039-5	1/12/94	Drawn By: TRF	Alameda Cellars 2425 Encinal Avenue	Site Plan Figure 1
ACC Environmental Consultants • 1000 Atlantic Ave, Suite 110 • Alameda, CA 94501 • (510) 522-8188 • FAX: (510) 865-5731				



LEGEND
 ● Monitoring Well
 * Measured on 12/13/94

Scale: 1" = 20'
 Source: Wells Surveyed by Ron Archer
 Elevations illustrated in Feet Above Mean Sea Level

**Figure 2 - Groundwater Gradient
 Measured on 12/07/94
 2425 Encinal Avenue
 Alameda, California**

Project # 94-6039-5	12/29/94	Drawn By: MCK
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APPENDIX A

Well Number: MW 1

Job Number: 6039-5

Job Name: 2425 Encinal

Date: 12/7/94

Sampler: ACE

Depth to Water (measured from TOC): 6.92

Inside Diameter of Casing: 2"

Depth of Boring: 17.41

Method of well development/curging: Bailing

Amount of Water Bailed/Pumped from well: 8 gallons

Depth to Water after well development: _____

Depth to water prior to sampling: 7.01

Bailed water stored on-site? How? Drum

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope? New rope, New bailer

17.41
6.92
10.49

Water Appearance:

	yes	no
froth		✓
irridescence		✓
oil		✓
smell	✓	
product		✓
other, describe		✓

Samples Obtained:

- TPH (gasoline)
- TPH (diesel)
- TPH (motor oil)
- BTXE
- EPA 624
- EPA 625
- EPA 608
- PCBs only
- Metals
- Other, specify
- Field Blank

Gallons Removed	pH	EC	Temp
5	6.74	.51	70.8
10	6.96	.54	69
15	6.84	.53	67.3
20	6.80	.50	71.6
25	6.76	.52	71.6
30	6.84	.51	70.8
35	6.87	.50	71.3
40			
45			
50			

Well Sampling

Well Development

check one

Well Number: MW 2AJob Number: 6039-5Job Name: 2425 EdinaDate: 12/7/94Sampler: BCEDepth to Water (measured from TOC): 7.23Inside Diameter of Casing: 2"Depth of Boring: 14.18Method of well development/purging: BailingAmount of Water Bailed/Pumped from well: 7 gallons

Depth to Water after well development: _____

→ Depth to water prior to sampling: 7.31Bailed water stored on-site? How? DrumNumber of well volumes removed: 4TSP wash, distilled rinse, new rope? New Rope, New Bailer

Water Appearance:

	yes	no
froth		✓
irridescence		✓
oil		✓
smell	✓	
product		✓
other, describe		✓

Gallons Removed	pH	EC	Temp
5	7.46	-75	71.8
10	6.96	-86	71.8
15	6.75	-73	70.7
20	6.68	-61	70.6
25	5.62	-63	70.8
30	5.58	-61	70.6
35	5.54	-58	70.3
40			
45			
50			

Samples Obtained:

TPH (gasoline)	✓
TPH (diesel)	
TPH (motor oil)	
BTXE	✓
EPA 624	
EPA 625	
EPA 608	
PCBs only	
Metals	
Other, specify	
Field Blank	

14.18
7.23

6.95

Well Sampling Well Development check one

Well Number: MW3

Job Number: 6039-5

Job Name: 2425 Encinal

Date: 12/7/94

Sampler: ACE

Depth to Water (measured from TOC): 6.92

Inside Diameter of Casing: 2"

Depth of Boring: 13.93

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 7 gallons

Depth to Water after well development: _____

Depth to water prior to sampling: 6.98

Bailed water stored on-site ? How ? Drum

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New rope, New Bailers

13.93
6.92
7.01

Water Appearance:

	yes	no
froth		✓
iridescence		✓
oil		✓
smell	✓	
product		✓
other, describe		✓

Gallons Removed	pH	EC	Temp
5	7.02	.66	70.8
10	6.91	.31	72.4
15	6.98	.75	71.4
20	6.75	.65	70.6
25	6.74	.63	70.7
30	6.76	.62	70.8
35			
40			
45			
50			

Samples Obtained:

TPH (gasoline)	<input type="checkbox"/>
TPH (diesel)	<input type="checkbox"/>
TPH (motor oil)	<input type="checkbox"/>
BTXE	<input type="checkbox"/>
EPA 624	<input type="checkbox"/>
EPA 625	<input type="checkbox"/>
EPA 608	<input type="checkbox"/>
PCBs only	<input type="checkbox"/>
Metals	<input type="checkbox"/>
Other, specify	<input type="checkbox"/>
Field Blank	<input type="checkbox"/>

Well Number: MW 4

Job Number: 6039-5

Job Name: 2425 Encinal

Date: 12/7/94

Sampler: ACE

Depth to Water (measured from TOC): 6.32

Inside Diameter of Casing: 2"

Depth of Boring: 17.52

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 10 gallons

Depth to Water after well development: _____

Depth to water prior to sampling: 6.94

Bailed water stored on-site? How? Drum

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope? New Rope New bucket

17.52
6.32
11.20

Water Appearance:

	yes	no
froth		<input checked="" type="checkbox"/>
irridescence		<input checked="" type="checkbox"/>
oil		<input checked="" type="checkbox"/>
smell	<input checked="" type="checkbox"/>	
product		<input checked="" type="checkbox"/>
other, describe		<input checked="" type="checkbox"/>

Samples Obtained:

- TPH (gasoline)
- TPH (diesel)
- TPH (motor oil)
- BTXE
- EPA 624
- EPA 625
- EPA 608
- PCBs only
- Metals
- Other, specify
- Field Blank

Gallons Removed	pH	EC	Temp
5	6.88	.50	69.4
10	7.03	.49	69.5
15	6.97	.49	69.3
20	7.04	.46	66.4
25	7.01	.47	70.1
30	6.98	.46	69.7
35	7.1	.46	70.3
40	7.1	.45	67.7
45	7.03	.46	70.2
50			

Well Sampling Well Development check one

Well Number: MW 5

Job Number: 6039-5

Job Name: 2425 Encinal

Date: 12/7/94

Sampler: ACE

Depth to Water (measured from TOC): 7.08

Inside Diameter of Casing: 2"

Depth of Boring: 17.51

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 8 gallons

Depth to Water after well development:

Depth to water prior to sampling: 7.17

Bailed water stored on-site? How? Drum

Number of well volumes removed: 4

TSP wasn, distilled rinse, new rope? New Rope New Baker

17.51
7.08
10.43

Water Appearance:

	yes	no
froth		<input checked="" type="checkbox"/>
irridescence		<input checked="" type="checkbox"/>
oil		<input checked="" type="checkbox"/>
smell		<input checked="" type="checkbox"/>
product		<input checked="" type="checkbox"/>
other, describe		<input checked="" type="checkbox"/>

Gallons Removed	pH	E	Temp
5	6.77	.57	72.3
10	6.97	.55	70.6
15	7.07	.57	70.8
20	7.05	.56	70.6
25	7.02	.57	70.8
30			
35			
40			
45			
50			

Samoles Obtained:

- TPH (gasoline)
- TPH (diesel)
- TPH (motor oil)
- BTXE
- EPA 624
- EPA 625
- EPA 608
- PCBs only
- Metals
- Other, specify
- Field Blank

Well Sampling Well Development check one

Well Number: MW6

Job Number: 6039-5

Job Name: 2425 Encinal

Date: 12/13/94

Sampler: ACE

Depth to Water (measured from TCC): 6.73

Inside Diameter of Casing: 2"

Depth of Boring: 17.59

Method of well development/purging: Bailing

Amount of Water Bailed/Pumped from well: 7.2 gallons

Depth to Water after well development: _____

Depth to water prior to sampling: 6.91

Bailed water stored on-site? How? Drum

Number of well volumes removed: 4

TSP wasn, distilled rinse, new rope? New Rope - New Bailor

Water Appearance:

	yes	no
froth		<input checked="" type="checkbox"/>
irridescence		<input checked="" type="checkbox"/>
oil		<input checked="" type="checkbox"/>
smell		<input checked="" type="checkbox"/>
product		<input checked="" type="checkbox"/>
other, describe		<input checked="" type="checkbox"/>

Gallons Removed	pH	ED	Temp
2.5	10.63	.55	63.8
4.18	10.52	.52	62.9
6.15	10.50	.50	62.7
6.520	10.40	.49	62.6
25	10.30	.49	62.7
30	10.29	.48	62.5
35	10.29	.49	62.6
40			
45			
50			

Samples Obtained:

TPH (gasoline)	<input checked="" type="checkbox"/>
TPH (diesel)	<input type="checkbox"/>
TPH (motor oil)	<input type="checkbox"/>
BTXE	<input checked="" type="checkbox"/>
EPA 624	<input type="checkbox"/>
EPA 625..	<input type="checkbox"/>
EPA 608	<input type="checkbox"/>
PCBs only	<input type="checkbox"/>
Metals	<input type="checkbox"/>
Other, specify	<input type="checkbox"/>
Field Blank	<input type="checkbox"/>

Well Sampling Well Development check one

Well Number: MW 6

Job Number: 6039-5

Job Name: 2425 Encinal

Date: 12/7/94

Sampler: ACE

Car parked
over well.
Inaccessible.

Depth to Water (measured from TOC): _____

Inside Diameter of Casing: _____

Depth of Boring: _____

Method of well development/purging: _____

Amount of Water Bailed/Pumped from well: _____

Depth to Water after well development: _____

Depth to water prior to sampling: _____

Bailed water stored on-site ? How ? _____

Number of well volumes removed: _____

TSP wash, distilled rinse, new rope ? _____

Water Appearance:

	yes	no
froth		
irridescence		
oil		
smell		
product		
other, describe		

Samples Obtained:

- TPH (gasoline)
- TPH (diesel)
- TPH (motor oil)
- BTXE
- EPA 624
- EPA 625
- EPA 608
- PCBs only
- Metals
- Other, specify
- Field Blank

Gallons Removed	pH	EC	Temp
5			
10			
15			
20			
25			
30			
35			
40			
45			
50			

APPENDIX B

CHROMALAB, INC.

Environmental Services (SDB)

December 15, 1994

Submission #: 9412132

ACC ENVIRONMENTAL CONSULTANTS

Atten: Misty Kaltreider

Project: 2425 ENCINAL
Received: December 8, 1994

Project#: 6039-5

re: 5 samples for Gasoline and BTEX analysis.

Matrix: WATER
Sampled: December 7, 1994 Run#: 4870 Analyzed: December 15, 1994
Method: EPA 5030/8015M/602/8020

Sp#	CLIENT	SAMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
72260	MW-1		9.1	530	200	350	1300
72261	MW-2A		6.8	640	100	370	950
72262	MW-3		0.42	16	8.3	26	37
72263	MW-4		2.1	82	9.6	4.7	14
72264	MW-5		N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits			0.05	0.5	0.5	0.5	0.5
Blank Result			N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)			115	109	108	113	111



Jack Kelly
Chemist



Ali Kharrazi
Organic Manager

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

DATE 12-7-94 PAGE 1 OF 1

PROJ. MGR. Kaltveider
 COMPANY ACC
 ADDRESS 1000 Atlantic Avenue
Alameda, CA 94511

SAMPLERS (SIGNATURE) Alison Ekdale (PHONE NO) _____

SAMPLE ID.					ANALYSIS REPORT																	NUMBER OF CONTAINERS			
SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (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 3520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (ICLP, STLC)					
MW1	12-7-94	2:35	Water	Cold	X																			3	
MW2A		4:07	Water	cold	X																				3
MW3		3:25	Water	cold	X																				3
MW4		1:25	Water	Cold	X																				3
MW5		11:45	Water	Cold	X																				3

PROJECT INFORMATION
 PROJECT NAME: 2425 Encinal
 PROJECT NUMBER: 6039-5
 P.O.# 6039-5

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

RELINQUISHED BY <u>Alison Ekdale</u> (SIGNATURE) (TIME) <u>Alison Ekdale 12/8</u> (PRINTED NAME) (DATE) <u>ACC Environmental</u> (COMPANY)	RELINQUISHED BY _____ (SIGNATURE) (TIME) _____ (PRINTED NAME) (DATE) _____ (COMPANY)	RELINQUISHED BY _____ (SIGNATURE) (TIME) _____ (PRINTED NAME) (DATE) _____ (COMPANY)
RECEIVED BY <u>[Signature]</u> (SIGNATURE) (TIME) <u>Morgan 12-9-94</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	RECEIVED BY _____ (SIGNATURE) (TIME) _____ (PRINTED NAME) (DATE) _____ (COMPANY)	RECEIVED BY (LABORATORY) _____ (SIGNATURE) (TIME) _____ (PRINTED NAME) (DATE) _____ (LAB)

SPECIAL INSTRUCTIONS/COMMENTS:
 :

CHROMALAB, INC.

Environmental Services (SDB)

December 19, 1994

Submission #: 9412204

ACC ENVIRONMENTAL CONSULTANTS

Atten: Misty Kaltreider

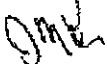
Project: 2425 ENCINAL
Received: December 14, 1994

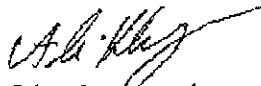
Project#: 6039-5

re: 1 sample for Gasoline and BTEX analysis.

Matrix: WATER
 Sampled: December 13, 1994 Run#: 4902 Analyzed: December 16, 1994
 Method: EPA 5030/8015M/602/8020

Spl #	CLIENT	SMPLE ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
72856	MW6		N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits			0.05	0.5	0.5	0.5	0.5
Blank Result			N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)			90	109	109	109	113


 Jack Kelly
 Chemist


 Ali Kharrazi
 Organic Manager

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

DATE 12/14 PAGE _____ OF _____

PROJ. MGR. Misty Kaitreider
 COMPANY Acc Environmental Consultants
 ADDRESS 1000 A e Ave Suite 110
Alameda Ca, 94501
 SAMPLERS (SIGNATURE) Alison Ekdek (PHONE NO) 510-522-8188

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 524, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS
MW6	12/13	9:30	Water	Cold		X															

PROJECT INFORMATION

PROJECT NAME: 2425 Encinal
 PROJECT NUMBER: 6039-5
 P.O.# 6039-5
 TAT STANDARD 5-DAY

SAMPLE RECEIPT

TOTAL NO OF CONTAINERS 3
 HEAD SPACE
 REC'D GOOD CONDITION/COLD
 CONFORMS TO RECORD
 24 48 72 OTHER

SPECIAL INSTRUCTIONS/COMMENTS:
Rush 72 hr turnaround time.

RELINQUISHED BY 1
 SIGNATURE: Alison Ekdek (TIME)
 PRINTED NAME: Alison Ekdek (DATE) 12/14
 COMPANY: Acc Environmental
 RECEIVED BY 1
 SIGNATURE: [Signature] (TIME) 1430
 PRINTED NAME: B. Morron (DATE) 12-14-94
 COMPANY: Chromalab

RELINQUISHED BY 2
 SIGNATURE: _____ (TIME)
 PRINTED NAME: _____ (DATE)
 COMPANY: _____
 RECEIVED BY 2
 SIGNATURE: _____ (TIME)
 PRINTED NAME: _____ (DATE)
 COMPANY: _____

RELINQUISHED BY 3
 SIGNATURE: _____ (TIME)
 PRINTED NAME: _____ (DATE)
 COMPANY: _____
 RECEIVED BY (LABORATORY) 3
 SIGNATURE: _____ (TIME)
 PRINTED NAME: _____ (DATE)
 COMPANY: _____

CHROMALAB, INC.

Environmental Services (SOB)

December 15, 1994

Submission #: 9412132

ACC ENVIRONMENTAL CONSULTANTS

Atten: Misty Kaltreider

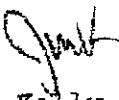
Project: 2425 ENCINAL
Received: December 8, 1994

Project#: 6039-5

re: 5 samples for Gasoline and BTEX analysis.

Matrix: WATER
Sampled: December 7, 1994 Run#: 4870 Analyzed: December 15, 1994
Method: EPA 5030/8015M/602/8020

Spl #	CLIENT SMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
72260	MW-1	9.1	530	200	350	1300
72261	MW-2A	6.8	640	100	370	950
72262	MW-3	0.42	16	8.3	26	37
72263	MW-4	2.1	82	9.6	4.7	14
72264	MW-5	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits		0.05	0.5	0.5	0.5	0.5
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		115	109	108	113	111



Jack Kelly
Chemist



Ali Kharrazi
Organic Manager

CHROMALAB, INC.

DOIIS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

DATE 12-7-94 PAGE 1 OF 1

PROJ. MGR. Kaltveider
 COMPANY ACC
 ADDRESS 1000 Atlantic Avenue
Alameda, CA 94511

SAMPLERS (SIGNATURE) Alison Ekdale (PHONE NO)

SAMPLE ID. DATE TIME MATRIX PRESERV.					ANALYSIS REPORT														NUMBER OF CONTAINERS
TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel (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, 5+F)	PCB (EPA 606, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)				
MW1	12-7-94	2:35	Water Cold	X														3	
MW2A		4:07	Water cold	X														3	
MW3		3:25	Water cold	X														3	
MW4		1:25	Water Cold	X														3	
MW5		11:45	Water Cold	X														3	

PROJECT INFORMATION
 PROJECT NAME: 2425 Encinal
 PROJECT NUMBER: 6039-5
 P.O.# 6039-5

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 1 <u>Alison Ekdale</u> (SIGNATURE) (TIME) <u>Alison Ekdale 12/8</u> (PRINTED NAME) (DATE) <u>ACC Environmental</u> (COMPANY)	RELINQUISHED BY 2	RELINQUISHED BY 3
RECEIVED BY 1 <u>[Signature]</u> (SIGNATURE) (TIME) <u>Marlow 12-7-94</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	RECEIVED BY 2	RECEIVED BY (LABORATORY) 3

CHROMALAB, INC.

Environmental Services (SDB)

December 19, 1994

Submission #: 9412204

ACC ENVIRONMENTAL CONSULTANTS

Atten: Misty Kaltreider

Project: 2425 ENCINAL
Received: December 14, 1994

Project#: 6039-5

re: 1 sample for Gasoline and BTEX analysis.

Matrix: WATER

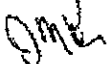
Sampled: December 13, 1994

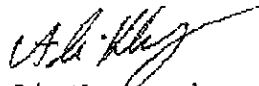
Run#: 4902

Analyzed: December 16, 1994

Method: EPA 5030/8015M/602/8020

Spl #	CLIENT	SMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
72856	MW6		N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits			0.05	0.5	0.5	0.5	0.5
Blank Result			N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)			90	109	109	109	113


 Jack Kelly
 Chemist


 Ali Kharrazi
 Organic Manager

CHROMALAB, INC.

DOHS 1094

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798

Chain of Custody

DATE 12/14 PAGE OF

PROJ. MGR. Misty Kaltreider
 COMPANY ACC Environmental Consultants
 ADDRESS 1000 A e Ave. Suite 110
Alameda Ca, 94501
 SAMPLERS (SIGNATURE) Alison Ekduk (PHONE NO) 510-522-8188

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline	TPH - Gasoline	TPH - Diesel	PURGEABLE AROMATICS	PURGEABLE HALOCARBONS	VOLATILE ORGANICS	BASE/NEUTRALS, ACIDS	TOTAL OIL & GREASE	PCB	PESTICIDES	TOTAL RECOVERABLE	METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS
					(EPA 5030, 8015)	w/BTEX (EPA 602, 8020)	(EPA 3510/3550, 8015)	BTEX (EPA 602, 8020)	(EPA 601, 8010)	(EPA 624, 8240, 524.2)	(EPA 625/627, 8270, 525)	(EPA 5520, B+F, E+F)	(EPA 608, 8080)	(EPA 608, 8080)	(EPA 418.1)						
MW6	12/13	9:30	Water	Cold		X															

PROJECT INFORMATION
 PROJECT NAME: 2425 Encinal
 PROJECT NUMBER: 6039-5
 P.O.# 6039-5
 TAT STANDARD 5-DAY: 24 48 72 OTHER

SAMPLE RECEIPT
 TOTAL NO OF CONTAINERS: 3
 HEAD SPACE:
 REC'D GOOD CONDITION/COLD:
 CONFORMS TO RECORD:

SPECIAL INSTRUCTIONS/COMMENTS:
Rush 72 hr turnaround time.

RELINQUISHED BY <u>Alison Ekduk</u> (SIGNATURE) (TIME) <u>Alison Ekduk 12/14</u> (PRINTED NAME) (DATE) <u>ACC Environmental</u> (COMPANY)	RELINQUISHED BY <u> </u> (SIGNATURE) (TIME) <u> </u> (PRINTED NAME) (DATE) <u> </u> (COMPANY)	RELINQUISHED BY <u> </u> (SIGNATURE) (TIME) <u> </u> (PRINTED NAME) (DATE) <u> </u> (COMPANY)
RECEIVED BY <u>B. Merrou</u> (SIGNATURE) (TIME) <u>B. Merrou 12-14-99</u> (PRINTED NAME) (DATE) <u>Chromalab</u> (COMPANY)	RECEIVED BY <u> </u> (SIGNATURE) (TIME) <u> </u> (PRINTED NAME) (DATE) <u> </u> (COMPANY)	RECEIVED BY (LABORATORY) <u> </u> (SIGNATURE) (TIME) <u> </u> (PRINTED NAME) (DATE) <u> </u> (DATE)