

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
(510) 337-9335 (FAX)

StID 3732

August 20, 1999

Mr. Kaz Katayama, President  
Moller Ranch LP  
c/o Boulevard Development  
856 North Commerce  
Orange, CA 92667

**Re: Fuel Leak Site Case Closure for 5710 Foothill Road (Lott 99), Pleasanton, CA**

Dear Mr. Katayama:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

**SITE INVESTIGATION AND CLEANUP SUMMARY**

Please be advised that the following conditions exist at the site:

- up to 75ppm TPH as gasoline and 0.22ppm benzene exists in soil beneath the site;
- up to 17,000ppb TPHg and 140ppb benzene exists in groundwater beneath the site; and,
- a site safety plan must be prepared for construction workers in the event of excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.

If you have any questions, please contact me at (510) 567-6762.

eva chu  
Hazardous Materials Specialist

enclosures: 1. Case Closure Letter      2. Case Closure Summary

c: Danielle Stefani, Livermore-Pleasanton Fire Department  
files (moller16)



ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250  
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(510) 567-6700  
(510) 337-9335 (FAX)

**REMEDIAL ACTION COMPLETION CERTIFICATION**

**StID 3732 - 5710 Foothill Road ( Tract6618, Lot 99), Pleasanton, CA  
(1-350 gallons tank removed in May 1990)**

August 24, 1999

Mr. Kaz Katayama, President  
Moller Ranch LP  
c/o Boulevard Development  
856 North Commerce  
Orange, CA 92667

Dear Mr. Katayama:

This letter confirms the completion of site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

cc: Richard Pantages, Chief of Division of Environmental Protection  
Chuck Headlee, RWQCB  
Dave Deaner, SWRCB  
Danielle Stefani, Livermore-Pleasanton Fire Department  
files-ec (moller15)

RB #01-1011

Headlee

**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**

**I. AGENCY INFORMATION**

**Date: June 30, 1999**

Agency name: **Alameda County-HazMat**  
City/State/Zip: **Alameda, CA 94502**  
Responsible staff person: **Eva Chu**

Address: **1131 Harbor Bay Pkwy**  
Phone: **(510) 567-6700**  
Title: **Hazardous Materials Spec.**

**II. CASE INFORMATION**

Site facility name: **Moller Ranch**  
Site facility address: **5710 Foothill Road, Pleasanton, CA**  
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **3732**  
URF filing date: **2/26/90** SWEEPS No: **N/A**

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
<b>Hamid Taeb</b> <b>Boulevard Development</b> <b>856 North Commerce</b> <b>Orange, CA 92667</b>	<b>Don Wallace</b> <b>155 Sea Cliff Drive East</b> <b>Aptos, CA 95003</b>	

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
<b>1</b>	<b>350</b>	<b>Unknown</b>	<b>Removed</b>	<b>5/1990</b>

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and type of release: **Leaking UST (hole on bottom of UST)**  
Site characterization complete? **YES**  
Date approved by oversight agency: **5/5/99**  
Monitoring Wells installed? **Yes** Number: **6**  
Proper screened interval? **Yes, 5 to 25' bgs in well MW-1**  
Highest GW depth below ground surface: **8.67'** Lowest depth: **15.67' bgs**  
Flow direction: **N, NE**  
Most sensitive current use: **Residential**  
Are drinking water wells affected? **No** Aquifer name: **NA**  
Is surface water affected? **No** Nearest affected SW name: **NA**  
Off-site beneficial use impacts (addresses/locations): **None**  
Report(s) on file? **YES** Where is report(s) filed? **Alameda County** **Livermore Fire Dept**  
**1131 Harbor Bay Pkwy and** **4550 East Ave**  
**Alameda, CA 94502** **Livermore, CA 94550**

QUALITY CONTROL BOARD  
JUL 20 1999  
CALIFORNIA REGIONAL WATER

99 AUG -4 PM 3:04  
ENVIRONMENTAL PROTECTION

**Treatment and Disposal of Affected Material:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	1 UST	Unknown disposal site	5/90
Soil	600 cy	Aerated and re-used to backfill excavation	5/95

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

Contaminant	Soil (ppm)		Water (ppb)	
	Before <sup>1</sup>	After <sup>2</sup>	Before <sup>3</sup>	After <sup>4</sup>
TPH (Gas)	190	75	29,000	17,000
TPH (Diesel)	270	8	24,000	6,300 <sup>5</sup>
Benzene	3.3	0.22	11,000	140
Toluene	13	0.6	220	130
Ethylbenzene	3.7	0.5	1,600	1,600
Xylenes	18	0.6	1,100	96
MTBE	NA	NA	NA	<5
Other EDB	.044	NA	NA	ND <sup>6</sup>
1,2,DCA		0.05	590	ND <sup>6</sup>
Organic lead	ND			

- NOTE:**
- 1 soil samples collected from UST pit at time of removal, 5/90
  - 2 soil samples collected after overexcavation, 9/94
  - 3 historical maximum concentrations in well MW-1, 1993-1994
  - 4 recent hydropunch advanced downgradient of former UST, 4/98
  - 5 detected in well MW-1 before it was decommissioned, 9/94
  - 6 results of groundwater sample from well MW-5 and MW-6, 4/99

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? \_\_\_\_\_

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? \_\_\_\_\_

Does corrective action protect public health for current land use? **YES**

Site management requirements: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**

Should corrective action be reviewed if land use changes? **YES**

Monitoring wells Decommissioned: **Yes, one, and others to be decommissioned upon site closure**

Number Decommissioned: **1** Number Retained: **5**

List enforcement actions taken:

List enforcement actions rescinded:

## V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu**

Title: **Haz Mat Specialist**

Signature: 

Date: 7/13/99

### Reviewed by

Name: **Barney Chan**


Title: **Haz Mat Specialist**

Signature: 

Date: 6/30/99

Name: **Thomas Peacock**

Title: **Supervisor**

Signature: 

Date: 7-13-99

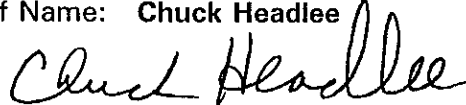
## VI. RWQCB NOTIFICATION

Date Submitted to RB: 7/14/99

RB Response:

RWQCB Staff Name: **Chuck Headlee**

Title: **EG**

Signature: 

Date: 8/2/99

## VII. ADDITIONAL COMMENTS, DATA, ETC.

The Moller Property is 198 acres in size. 33 of the 198 acres were recently subdivided into 99 residential units. An underground storage tank was located near the base of the northeast facing slope just off of Foothill Boulevard on Lot 99 (Old Lot 1A). Gold Creek is a seasonal creek, which flows from the west to east across the adjoining property to the north of the Moller Property and approximately 300' to the northeast of the UST site.

(See Fig 1 and 2)

A geologic investigation was performed in February 1990 where an exploratory trench, T-11, was excavated. This trench was approximately 150' to 200' from the onsite residence and the UST. Petroleum hydrocarbon impacted soil was noted in the east end of the trench at ~7' to 8'bgs. (See Fig 3)

In May 1990 a 350 gallon UST, located adjacent to the onsite residence, was removed. A ½" diameter hole was noted on the tank bottom. Hydrocarbon odor and soil staining was noted from the native soil below the tank. Soil samples were collected from the pipeline trench (S-1 and S-2) and in the UST pit (S-3, S-4, and S-5). Soil samples S-3 and S-4 were collected 1' below the former UST, and soil S-5 was from 4' below the UST. The soil samples were analyzed for TPHg, BTEX, organic lead and ethylene dibromide (EDB). Soil samples from the tank pit bottom contained elevated levels of petroleum hydrocarbons. (See Table 1)

A total of five groundwater monitoring wells (MW-1 through MW-5) were installed in July/August 1990 in the vicinity of the former UST and the exploratory trench. Hydrocarbon vapors were detected in each boring. Soil and groundwater samples from the borings were analyzed for TPHg, TPHd, and BTEX. Analysis for HVOC was added since odors detected during field exploration appeared to be different than odors typical of gasoline and diesel fuels. Analytical results revealed 190ppm TPHd in soil from boring B-5/MW-5 at 11' bgs. Trace or non-detectable levels were in the other soil samples. The groundwater sample from boring B-1/MW-1 contained up to 3,400ppb TPHd, 16,000ppb TPHg, 3,000ppb benzene and 590ppb 1,2-DCA. In addition, low levels of 1,2-DCA were identified in groundwater from B-3/MW-3 and B-4/MW-4. (See Fig 4, Tables 2 and 5)

In September 1990 a soil gas survey was performed. A total of 41 soil gas probes (GP-1 through GP-41) were performed by extracting vapor from the unsaturated soil and bedrock materials at depths ranging from 4' to 18' bgs. Most of the samples were from 4' bgs. Relatively high levels of TPHg and BTEX constituents were detected in soil gas probes GP-1, GP-4, GP-11, GP-19, GP-20, and GP-33 (see Fig 3).

In May 1993 well MW-6 was installed offsite, downgradient, and ~90' northwest of well MW-5 (see Fig 4). Well MW-6 was completed to 26' bgs. Soil samples were collected and screened with an OVM. No readings were registered on the OVM. Two soil samples were submitted for laboratory analysis for TPHd, TPHg, BTEX and HVOCs. None of the analytes sought were detected, except for 28ppb toluene. Groundwater was not encountered and did not accumulate in the boring at this time.

In September 1994 approximately 500 cy of contaminated soil was excavated from three locations previously identified in the soil gas study to be impacted by VOCs (Area 1 is by the former UST, Area 2 by the former fuel pump, and Area 3 by an area with obvious hydrocarbon contamination). Area 2 required additional overexcavation, removing another 100cy of soil in October 1994. Confirmatory soil samples collected after overexcavation did not exceed 100ppm TPHg. Groundwater monitoring well MW-1 was destroyed during overexcavation activities. The stockpiled soil was aerated and subsequently reused to backfill the pits. When the site was graded, (in preparation for the housing development), another four feet of soil was placed over the former excavations/parcel. (See Fig 5, Table 3)

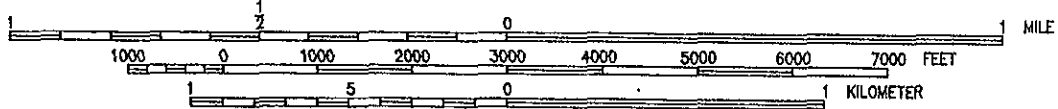
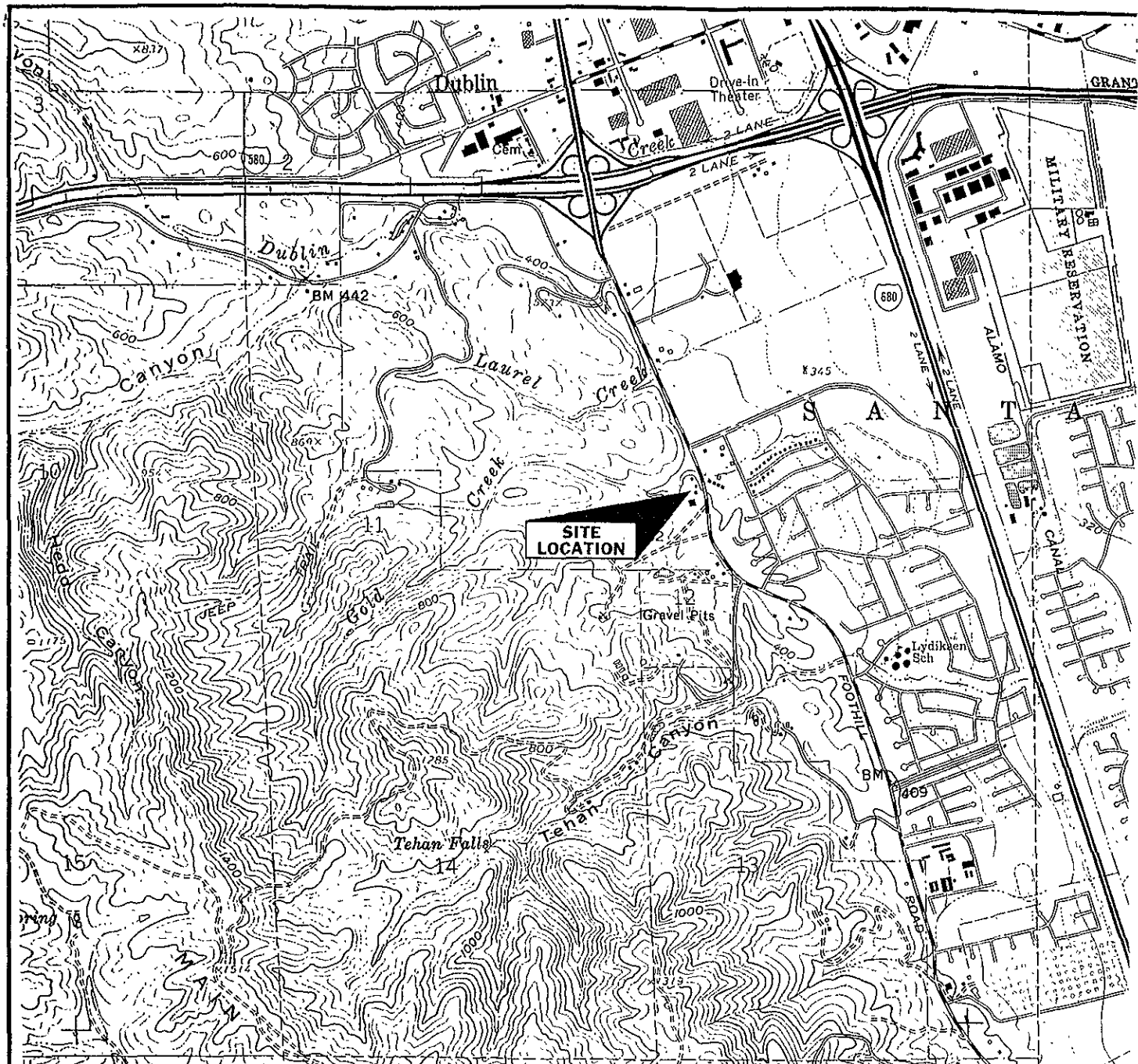
In April 1998 four soil borings (CB-1 through CB-4) were advanced to further assess groundwater quality downgradient of the former UST after contaminated soil was excavated. Boring CB-1 was located immediately downgradient of abandoned well MW-1. Borings CB-2, CB-3, and CB-4 were located in the vicinity of MW-5 where previous soil vapor investigation results indicated the presence of hydrocarbons in soil vapor. Water samples were analyzed for TPHg, BTEX, and MTBE. Low levels of TPHg and BTEX were still identified in groundwater. A maximum of 3,400ppb TPHg and 140ppb benzene was detected in boring CB-1, near the former UST. In the vicinity of well MW-5, boring CB-3 (to 15' bgs) contained up to 17,000ppb TPHg, and 12, 130, 1600, and 47ppb BTEX, respectively. (See Fig 6, Table 4)

In April and May 1999, water samples were collected from well MW-5 for HVOC analysis and from well MW-6 for TPHg, TPHd, BTEX, MTBE, and EDB analyses. None of these analytes were detected above the laboratory detection limits (see Tables 5A and 5B). Residual soil and groundwater contamination remain in the vicinity of the former UST and near MW-5, but the plume does not extend beyond well MW-6. Its potential impact to human health was evaluated with a RBCA Tier 2 risk assessment.

Ecological risk for Gold Creek was also evaluated. Chemicals of concern, which were evaluated, included BTEX and 1,2,DCA. The analysis revealed that site specific target levels were not exceeded. It appears residual soil and groundwater contamination does not pose a risk to human health or to Gold Creek. (See Tables 6, 7, and 8)

In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.



Portion of 7.5-Minute Dublin, California Quadrangle Map  
 United States Department of the Interior  
 Geological Survey  
 1961  
 Photorevised 1980

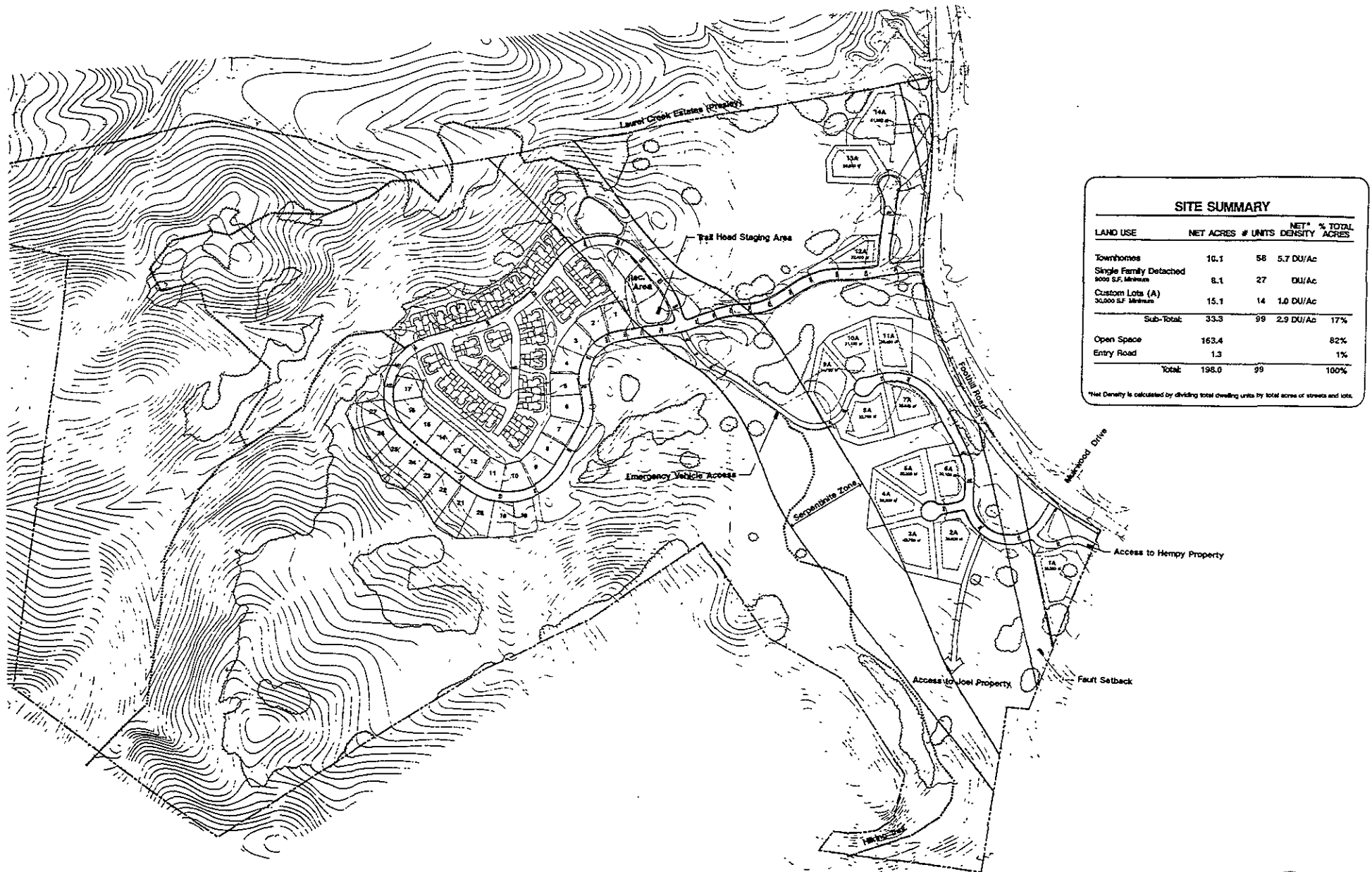


**SITE LOCATION MAP**  
 Moller Ranch - Lot 99  
 5598 Legendary Court  
 Pleasanton, California  
 Client: Boulevard Development  
 Clayton Project No. 70-98321.00

Figure  
**1**

**Clayton**  
 ENVIRONMENTAL  
 CONSULTANTS





SITE SUMMARY				
LAND USE	NET ACRES	# UNITS	NET DENSITY	% TOTAL ACRES
Townhomes	10.1	58	5.7 DU/Ac	
Single Family Detached 8000 S.F. Minimum	8.1	27	DU/Ac	
Custom Lots (A) 30,000 S.F. Minimum	15.1	14	1.0 DU/Ac	
Sub-Total:	33.3	99	2.9 DU/Ac	17%
Open Space	163.4			82%
Entry Road	1.3			1%
<b>Total:</b>	<b>198.0</b>	<b>99</b>		<b>100%</b>

\*Net Density is calculated by dividing total dwelling units by total acres of streets and lots.

FIG 2

**MOLLER RANCH**  
Pleasanton, California

Moller Properties  
10000 Main Street, Suite 100, Pleasanton, California 94566

Diaseal & Kary, Inc.  
Civil Engineers, Surveyors, & Landscape Architects  
10000 Main Street, Suite 100, Pleasanton, California 94566, Tel: 925-799-1000

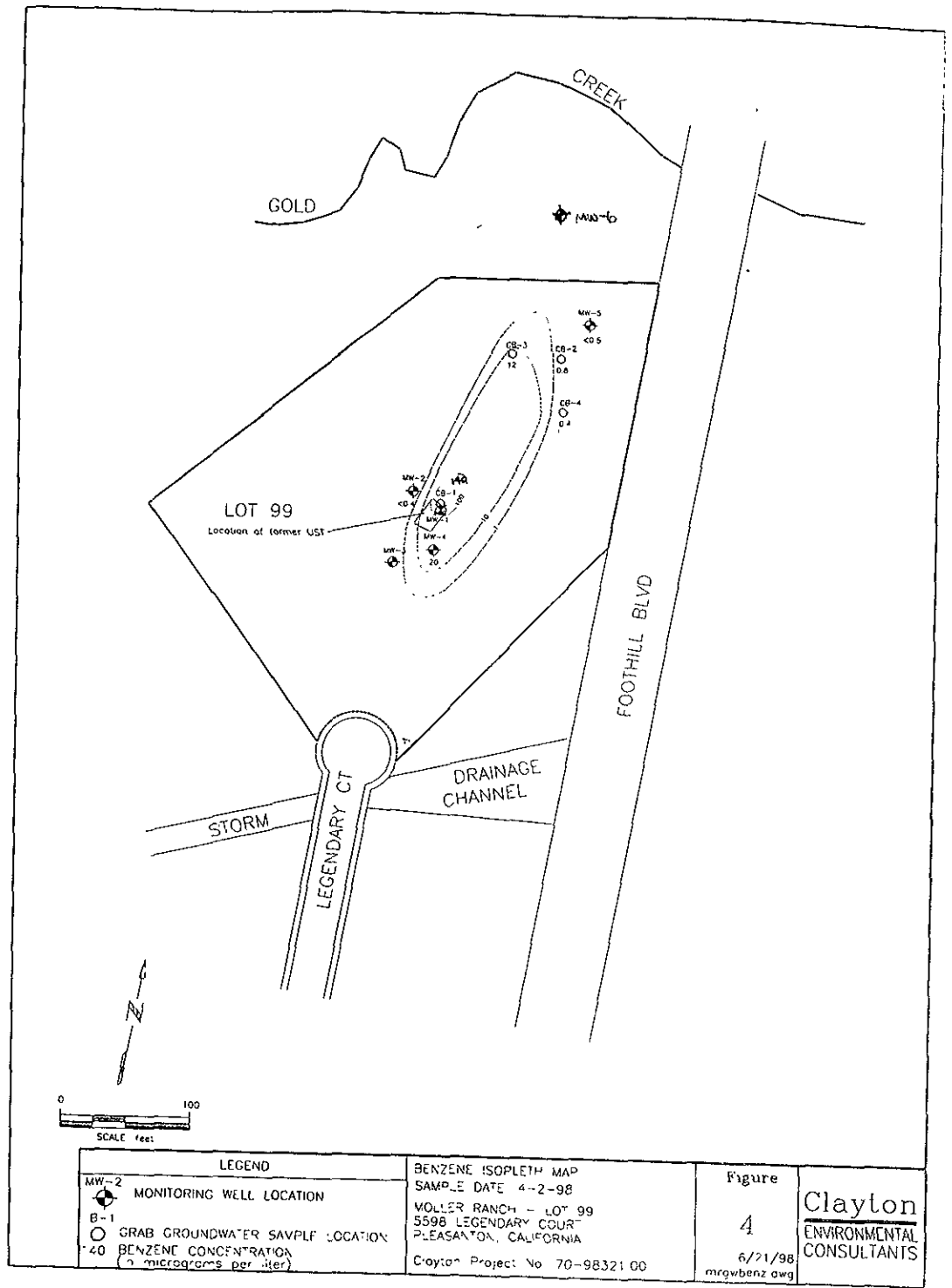
Scale: 1" = 20' - 0"

Table 1  
Analytical Summary for The Soil Samples  
Collected on May 10, 1990 (Orig Tech Report Summary)

All Concentrations in Milligrams per Kilogram (mg/kg)

Sample Location	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-D	EDB	Organic Lead
S-1	ND	ND	ND	ND	ND	ND	ND	ND
S-2	ND	ND	ND	ND	ND	ND	ND	ND
S-3	190	3.3	13		3.7	18	270	0.044
S-5	150	0.87	7.6		3.7	20	110	0.0076

EDB = Ethylene dibromide  
ND = Not detected at or above the analytical detection limits



LEGEND	
MW-2 ●	MONITORING WELL LOCATION
B-1 ○	GRAB GROUNDWATER SAMPLE LOCATION
○	40 BENZENE CONCENTRATION (micrograms per liter)

BENZENE ISOPLETH MAP  
 SAMPLE DATE 4-2-98  
 MOLLER RANCH - LOT 99  
 5598 LEGENDARY COURT  
 PLEASANTON, CALIFORNIA  
 Clayton Project No 70-98321 00

Figure  
 4  
 6/21/98  
 mrgwbz awg

**Clayton**  
 ENVIRONMENTAL  
 CONSULTANTS

Table 2

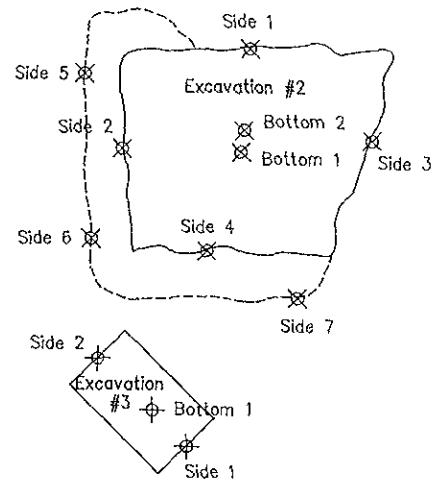
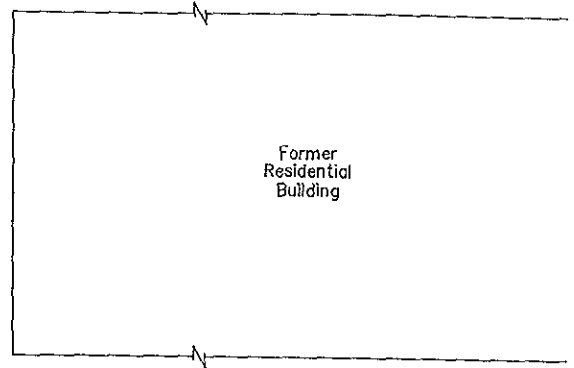
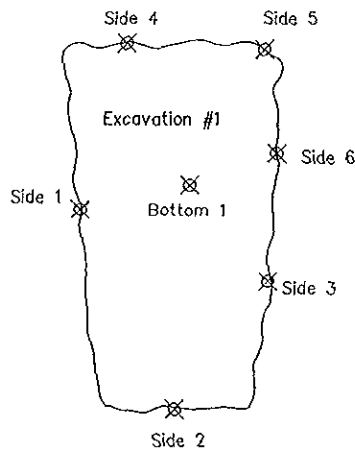
Job No. 1613.001

DETECTED CONTAMINANTS  
SOIL SAMPLES

<u>Boring</u>	<u>Sample Depth (ft)</u>	<u>TPH-Gasoline</u>	<u>TPH-Diesel</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Xylene</u>	<u>Ethylbenzene</u>
MW-1	10%	3,000	-	-	-	2,700	480
	15%	3,800	-	570	140	3,000	470
	20%	-	-	-	-	970	-
MW-4	10%	3,000	-	-	-	-	-
MW-5	5%	1,300	-	-	-	590	300
	10%	620	190,000	-	-	-	-
	25%	530	-	-	-	-	-

Note: All contaminant levels given in parts per billion (ppb)

Fig 5



LEGEND	
	Sample Location
	Overexcavation Boundary



Scale: 1"  $\cong$  10'

Excavation and Sample Locations  
MOLLER RANCH  
5710 Foothill Road  
Pleasanton, California

Clayton Project No. 57893.00

**Clayton**  
ENVIRONMENTAL  
CONSULTANT

57893-00-18

Table # 3  
 Analytical Summary for Soil Samples Collected From  
 Excavation and Over Excavation Areas in September 1994  
 All Concentrations in milligrams per kilograms (mg/kg)

Sample Location	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	TPH-D	1,2-DCA
Side 1 (Excavation 1)	ND	ND	ND	ND	ND	ND	NA
Side 2 (Excavation 1)	16	0.19	0.04	0.12	0.15	ND	NA
Side 3 (Excavation 1)	Hold	Hold	Hold	Hold	Hold	Hold	NA
Side 4 (Excavation 1)	ND	ND	ND	ND	ND	4	NA
Side 5 (Excavation 1)	41	0.13	0.02	0.13	0.15	5	NA
Side 6 (Excavation 1)	36	0.07	0.6	0.4	0.6	ND	NA
Bottom 1 (Excavation 1)	ND	ND	ND	ND	ND	ND	ND
Side 1 (Excavation 2)	6.6	0.14	0.05	0.04	0.1	ND	NA
Side 2 (Excavation 2)	1400	3	52	27	134	3	NA
Side 3 (Excavation 2)	4.7	0.02	0.03	0.03	0.13	9	NA
Side 4 (Excavation 2)	200	0.06	0.42	2.2	10.8	6	NA
Bottom 1 (Excavation 2)	ND	ND	ND	ND	ND	5	0.05
Side 5 (Excavation 2)	16	0.22	ND	0.2	ND	6	NA
Side 6 (Excavation 2)	75	0.1	0.1	0.5	0.3	8	NA
Side 7 (Excavation 2)	0.6	0.006	ND	ND	ND	ND	NA
Bottom 2 (Excavation 2)	NA	NA	NA	NA	NA	NA	ND
Side 1 (Excavation 3)	ND	ND	ND	ND	ND	ND	NA
Side 2 (Excavation 3)	ND	ND	ND	ND	ND	ND	NA
Bottom 1 (Excavation 3)	ND	ND	ND	ND	ND	ND	ND

ND = Not detected at or above the analytical detection limits  
 NA = Not analyzed

Table 4

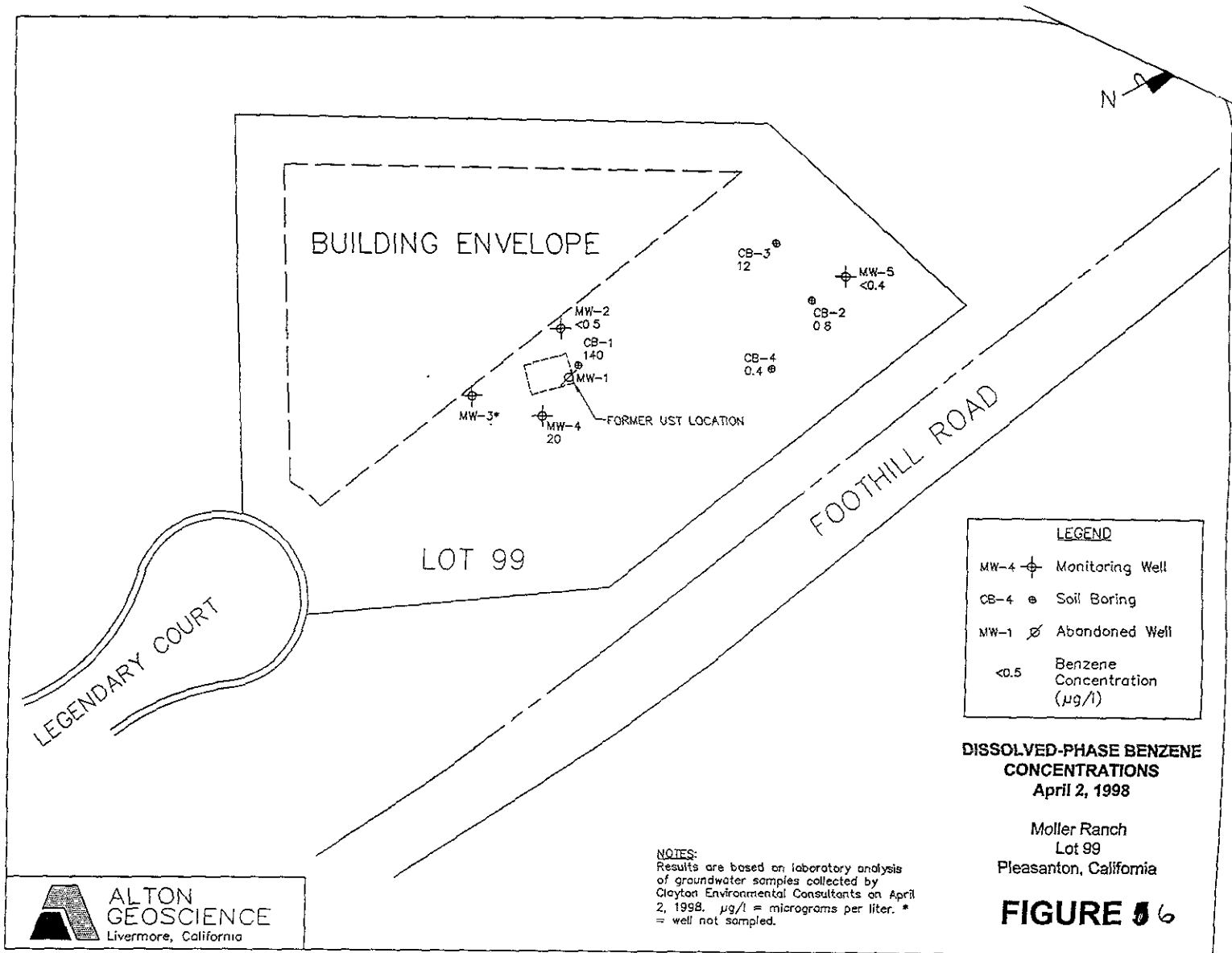
Petroleum Hydrocarbons Detected in Groundwater  
April 2, 1998

5598 Legendary Court - Moller Ranch Lot 99  
Pleasanton, California

Sample Location	Analyte ( $\mu\text{g/L}$ )	TPH-G ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Ethyl Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )
MW-2		<50	<0.4	<0.3	<0.3	<0.4	<5
MW-4		180	20	7.1	2.9	3.7	<5
MW-5		<50	<0.4	4.6	<0.3	<0.4	<5
CB-1	Soil borings	3,400	140	280	39	96	<30
CB-2		<50	0.8	1.8	2.0	6.1	<5
CB-3		17,000	12	1,600	130	47	<30
CB-4		<50	0.4	0.4	1.1	1.6	<5
MCL		NE	1	700	150	1,750	NE
					100 Federal		

Note:

- All results in micrograms per liter ( $\mu\text{g/L}$ ).
- MCL = California Maximum Contaminant Level for Drinking Water (CCR Title 22, Sections 64431 and 64444)
- NE = Not Established
- MTBE = Methyl tert-butyl ether



LEGEND	
MW-4	Monitoring Well
CB-4	Soil Boring
MW-1	Abandoned Well
<0.5	Benzene Concentration (µg/l)

**DISSOLVED-PHASE BENZENE CONCENTRATIONS**  
**April 2, 1998**

Moller Ranch  
 Lot 99  
 Pleasanton, California

**FIGURE 56**

**NOTES:**  
 Results are based on laboratory analysis of groundwater samples collected by Clayton Environmental Consultants on April 2, 1998. µg/l = micrograms per liter. \* = well not sampled.



Table 3

## Summary of Groundwater Analytical Results

5598 Legendary Court - Moller Ranch Lot 99  
Pleasanton, California

Sample Location	Analyte Sample Date	TPH-D <sup>1</sup> (µg/L) <sup>1</sup>	TPH-G <sup>2</sup> (µg/L)	Benzene (µg/L)	EthylBenzene (µg/L)	Toluene (µg/L)	Total Xylene (µg/L)	1,2-DCA <sup>3</sup> (µg/L)
MW-1	8/2/90	3,400	16,000	3,000	<90	<80	<100	590
	9/21/92	10,000	16,000	6,500	530	56	200	NA
	12/15/92	2,800	8,500	2,100	180	69	270	270
	3/12/93	3,000	9,900	3,900	680	<48	600	180
	6/22/93	11,000	20,000	9,400	1,600	220	1,100	210
	11/15/93	9,800	22,000	11,000	1,600	110	840	420
	5/11/94	24,000	29,000	4,900	860	54	160	540
	9/1/94	6,300	27,000	6,300	1,100	100	280	300
	9/7/94	Well Destroyed						
MW-2	8/2/90	<50	14	<0.5	<0.5	<0.5	<2	14
	9/21/92	81	<50	<0.5	<0.5	<0.5	<1.5	NA
	3/12/93	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.0
	11/15/93	<50	<50	<0.5	<0.5	<0.5	<1.5	NA
	5/11/94	<50	<50	<0.5	<0.5	<0.5	<1.5	NA
	9/1/94	<50	<50	<0.5	<0.5	<0.5	<1.5	NA
	7/25/95	<50	<50	<0.5	<0.5	<0.5	<1.5	NA
	4/2/98	NA <sup>1</sup>	<50	<0.4	<0.3	<0.3	<0.4	NA
MW-3	8/2/90	<50	260	2.7	8.5	0.79	3.8	5.5
	9/21/92	170	<50	<0.5	<0.5	<0.5	<1.5	NA
	3/12/93	<50	<50	<0.5	<0.5	<0.5	<1.5	<2.0
	11/15/93	690	<50	<0.5	<0.5	<0.5	<1.5	NA
	5/11/94	<50	<50	<0.5	<0.5	<0.5	<1.5	NA
	9/1/94	<50	<50	<0.5	<0.5	<0.5	<1.5	NA

Table #5

Summary of Groundwater Analytical Results

5598 Legendary Court - Moller Ranch Lot 99  
Pleasanton, California

Analyte	TPH-D'	TPH-G'	Benzene	EthylBenzene	Toluene	Total Xylene	1,2-DCA'	
Sample Location	Sample Date	(µg/L)'	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-4	8/2/90	<50	1,000	190	37	34	75	110
	9/21/92	140	640	360	5.9	<1.7	<5.2	NA
	3/12/93	<50	200	170	<0.5	<0.5	6.0	34
	11/15/93	74	1,000	680	78	<8.4	<23	NA
	5/11/94	80	1,900	320	60	<5.9	<16	NA
	9/1/94	NA	NA	NA	NA	NA	NA	NA
	7/25/95	<50	390	95	<0.5	10	3.2	NA
	4/2/98	NA	180	20	7.1	2.9	3.7	<0.6
MW-5	9/21/92	<50	91	12	14	<0.5	<1.5	NA
	12/15/92	<50	630	86	12	3.3	13	17
	3/12/93	<50	<50	<0.5	<0.5	<0.5	<1.5	3.5
	6/22/93	<50	<50	<0.50	<0.50	<0.50	<1.5	13
	11/15/93	<50	<50	<0.5	<0.5	<0.5	<1.5	NA
	5/11/94	<50	76	0.61	3.9	<0.50	<1.5	NA
	9/1/94	85	59	2	4.9	<0.5	<1.5	NA
	7/25/95	<50	73	0.76	<0.5	5.2	<1.5	NA
4/2/98	NA	<50	<0.4	4.6	<0.3	<0.4	NA	

Client: Geacon Environmental  
 Attn: Ross White  
 Client's Project: Muller Property, #E8001-06-01  
 Date Received: 04/15/99  
 Matrix: Water  
 Units: ug/l

Table SA

Date Analyzed: 05/21/99

Lab No.:	Method Blank	34947-001							
Client Sample I.D.:		MW6							
Date Sampled:		04/14/99							
QC Batch #:	F99VOCW070	F99VOCW070							
Date Analyzed:	04/21/99	04/21/99							
Analyst Initials:	SMC	SMC							
Dilution Factor:	1	1							
Benzene	0.5 0.5	ND 0.5	ND	0.5	ND				
Bromodichloromethane	0.5 0.5	ND 0.5	ND	0.5	ND				
Bromofur	1.0 1.0	ND 1.0	ND	1.0	ND				
Bromomethane	1.0 1.0	ND 1.0	ND	1.0	ND				
Carbon tetrachloride	0.5 0.5	ND 0.5	ND	0.5	ND				
Chlorobenzene	0.5 0.5	ND 0.5	ND	0.5	ND				
Chloroethane	1.0 1.0	ND 1.0	ND	1.0	ND				
2-Chloroethyl Vinyl Ether	1.0 1.0	ND 1.0	ND	1.0	ND				
Chloroform	0.5 0.5	ND 0.5	ND	0.5	ND				
Chloromethane	1.0 1.0	ND 1.0	ND	1.0	ND				
1,2-Dichlorobenzene	0.5 0.5	ND 0.5	ND	0.5	ND				
1,3-Dichlorobenzene	0.5 0.5	ND 0.5	ND	0.5	ND				
1,4-Dichlorobenzene	0.5 0.5	ND 0.5	ND	0.5	ND				
Dibromochloromethane	0.5 0.5	ND 0.5	ND	0.5	ND				
Dichlorodifluoromethane	1.0 1.0	ND 1.0	ND	1.0	ND				
1,1-Dichloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
1,2-Dichloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
1,1-Dichloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
trans-1,2-Dichloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
1,2-Dichloropropane	0.5 0.5	ND 0.5	ND	0.5	ND				
cis-1,3-Dichloropropene	0.5 0.5	ND 0.5	ND	0.5	ND				
trans-1,3-Dichloropropene	0.5 0.5	ND 0.5	ND	0.5	ND				
Ethylbenzene	0.5 0.5	ND 0.5	ND	0.5	ND				
Methylene Chloride	0.5 0.5	ND 0.5	ND	0.5	ND				
1,1,2,2-Tetrachloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
Tetrachloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
Toluene	0.5 0.5	ND 0.5	ND	0.5	ND				
1,1,1-Trichloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
1,1,2-Trichloroethane	0.5 0.5	ND 0.5	ND	0.5	ND				
Trichloroethene	0.5 0.5	ND 0.5	ND	0.5	ND				
Trichlorofluoromethane	0.5 0.5	ND 0.5	ND	0.5	ND				
1,2-Dibromoethane	0.5 0.5	ND 0.5	ND	0.5	ND				
Vinyl Chloride	1.0 1.0	ND 1.0	ND	1.0	ND				
Xylenes (total)	1.0 1.0	ND 1.0	ND	1.0	ND				

MDL = Method Detection Limit  
 ND = Not Detected (Below DLR)  
 DLR = MDL X Dilution Factor  
 NA = Not Analyzed

Reviewed/Approved By:

*Val Mallari*  
 Val Mallari  
 Department Supervisor

Date: 5/21/99

This copy letter is an integral part of this analytical report.



Advanced Technology  
 Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040





Client: Geocon Environmental  
 Attn: Rick Day

Cont. Table 5B

Client's Project: Moller Ranch, E8002-06-01  
 Date Received: 05/21/99  
 Matrix: Water  
 Units: µg/l

## EPA Method 8260B

Lab No.:	Method Blank	35845-001			
Client Sample I.D.:	--	MW-6			
Date Sampled:	--	05/20/99			
QC Batch #:	Q99VOCW101	Q99VOCW101			
Date Analyzed:	05/25/99	05/25/99			
Analyst Initials:	EM	EM			
Dilution Factor:	1	1			
<b>ANALYTE</b>	<b>MDL</b>	<b>DLR</b>	<b>Results</b>	<b>DLR</b>	<b>Results</b>
1,2-Dibromoethane	5	5	ND	5	ND

MDL = Method Detection Limit  
 ND = Not Detected (Below DLR)  
 DLR = MDL X Dilution Factor  
 NA = Not Analyzed

Reviewed/Approved By: \_\_\_\_\_

*EM*  
 Edgar Morrison  
 Volatus Group Leader

Date: \_\_\_\_\_

6/2/99

The cover letter is an integral part of this analytical report.



Advanced Technology  
 Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

**RBCA SITE ASSESSMENT**

Tier 2 Worksheet 9.2

Site Name: Lot 99

Completed By: Aitoh Geoscience

Site Location: Moiler Ranch

Date Completed: 2/11/1999

1 OF 1

**SUBSURFACE SOIL SSTL VALUES  
(> 3.3 FT BGS)**

Target Risk (Class A & B) 1 OE-5

MCL exposure limit?

Calculation Option 2

Target Risk (Class C) 1 OE-5

PEL exposure limit?

Groundwater DAF Option Domenico - First Order

Target Hazard Quotient 1 OE+0

(Two-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways ("X" if Complete)

CONSTITUENTS OF CONCERN		Representative Concentration (mg/kg)	Soil Leaching to Groundwater			Soil Volatilization to Indoor Air		Soil Volatilization to Outdoor Air		Applicable SSTL (mg/kg)	SSTL Exceeded ?	Required CRF
CAS No.	Name		Residential 300 feet	Commercial (on-site)	Regulatory(MCL) 300 feet	Residential (on-site)	Commercial (on-site)	Residential (on-site)	Commercial (on-site)			
71-43-2	Benzene	9.4E-2	4.7E+0	NA	NA	4.8E-1	NA	9.3E+1	NA	4.8E-1	<input type="checkbox"/>	<1
107-06-2	Dichloroethane, 1,2-	5.0E-2	2.4E+1	NA	NA	5.2E-1	NA	1.0E+2	NA	5.2E-1	<input type="checkbox"/>	<1
100-41-4	Ethylbenzene	7.1E-2	>Res	NA	NA	>Res	NA	>Res	NA	>Res	<input type="checkbox"/>	<1
108-88-3	Toluene	5.7E-2	>Res	NA	NA	2.3E+2	NA	>Res	NA	2.3E+2	<input type="checkbox"/>	<1
1330-20-7	Xylene (mixed isomers)	1.9E-1	>Res	NA	NA	>Res	NA	>Res	NA	>Res	<input type="checkbox"/>	<1

>Res indicates risk-based target concentration greater than constituent residual saturation value

Table 6

**RBCA SITE ASSESSMENT**

Tier 2 Worksheet 9.3

Site Name: Lot 99

Completed By: Alton Geoscience

Site Location: Moller Ranch

Date Completed: 2/11/1999

1 OF 1

**GROUNDWATER SSTL VALUES**

Target Risk (Class A & B) 1.0E-5  MCL exposure limit?  
 Target Risk (Class C) 1.0E-5  PEL exposure limit?  
 Target Hazard Quotient 1.0E+0

Calculation Option 2  
 Groundwater DAF Option Domenico - First Order  
 (Two-directional vert. dispersion)

**SSTL Results For Complete Exposure Pathways ("X" if Complete)**

CONSTITUENTS OF CONCERN		Representative Concentration	Groundwater Ingestion			Groundwater Volatilization to Indoor Air		Groundwater Volatilization to Outdoor Air		Applicable SSTL	SSTL Exceeded ?	Required CRF
CAS No.	Name	(mg/L)	Residential 300 feet	Commercial (on-site)	Regulatory(MCL) 300 feet	Residential (on-site)	Commercial (on-site)	Residential (on-site)	Commercial (on-site)	(mg/L)	■ If yes	Only if "yes" left
71-43-2	Benzene	1.9E-2	1.8E+0	NA	NA	2.9E+0	NA	5.4E+2	NA	1.8E+0	<input type="checkbox"/>	<1
107-06-2	Dichloroethane, 1,2-	3.4E-2	6.8E+0	NA	NA	6.2E+0	NA	1.1E+3	NA	6.2E+0	<input type="checkbox"/>	<1
100-41-4	Ethylbenzene	2.5E-4	>Sol	NA	NA	>Sol	NA	>Sol	NA	>Sol	<input type="checkbox"/>	<1
108-88-3	Toluene	2.5E-3	>Sol	NA	NA	>Sol	NA	>Sol	NA	>Sol	<input type="checkbox"/>	<1
1330-20-7	Xylene (mixed isomers)	2.5E-4	>Sol	NA	NA	>Sol	NA	>Sol	NA	>Sol	<input type="checkbox"/>	<1

>Sol indicates risk-based target concentration greater than constituent solubility

Table 7



EH  
P  
J  
Ecological Risk Evaluation

In the qualitative risk assessment guidance provided in ASTM Standard E 1739-95, the distance from the source to an ecologically sensitive receptor is of primary concern. For the Moller Ranch property, the only pathway through which residual COCs could affect an ecologically sensitive receptor is by groundwater transport. The receptor would be Gold Creek located approximately 300 feet downgradient of the former source area.

The following table shows site representative groundwater concentrations compared to California Water Quality Objectives for the COCs. Data do not exist in all categories for all of the COCs.

Comparison of Representative Groundwater Concentrations  
With Water Quality Objectives

COC	Representative Groundwater Concentration (ug/l)	California Water Quality Objectives (ug/l)			
		Acute Aquatic Toxicity	Chronic Aquatic Toxicity	Non-Cancer Health Effects	Taste and Odor Threshold
Benzene	19	5,300	-	-	170
Toluene	2.5	17,000	-	6,800/200,000	42
Ethylbenzene	0.25	32,000	-	3,100/29,000	29
Xylenes	0.25	-	-	-	17
1,2-DCA	34	118,000	20,000	-	7,000

# BORING LOG MW-1

**JOB NUMBER:** 1613.001      **DATE DRILLED:** 7-30-90  
**JOB NAME:** Moller Property      **SURFACE ELEVATION:** 417.03 feet  
**DRILL RIG:** Hollow Stem Auger      **DATUM:** Alameda County  
**SAMPLER TYPE:** 2.5 inch I.D. Split Barrel      **DRIVE WEIGHT - LB:** 140      **HEIGHT OF FALL - IN:** 30

BLOWS PER FT.	MOISTURE CONTENT %	DRY UNIT WEIGHT p.c.f.	DEPTH IN FEET	USCS CLASSIFICATION	DESCRIPTION
				CL	SILTY CLAY, brown, wet to moist, very stiff, some fine-grained sand, low plasticity
					SILTSTONE, orange-brown, friable, crushed, thickly bedded, some sand and clay (Livermore Gravels)
50/4*			5		SANDSTONE, mottled, gray and orange-brown, friable, crushed, thinly bedded (Livermore Gravels)
					CONGLOMERATE, orange-brown, friable, crushed, thickly bedded, gravel up to 2 inches in diameter (Livermore Gravels)
					CLAYSTONE, brown, friable, crushed, thinly bedded (Livermore Gravels)
					CONGLOMERATE, fine, orange-brown, friable, crushed, thinly bedded (Livermore Gravels)
75			10		SILTSTONE, orange-brown, friable, crushed, thickly bedded (Livermore Gravels) at 10 feet, petroleum smell
					SANDSTONE, coarse, green-gray, friable, crushed, thinly bedded, stained, strong petroleum smell (Livermore Gravels)
53			15		CLAYSTONE, orange-brown, friable, crushed, green stains in upper 1/2 feet (Livermore Gravels)
					SANDSTONE, coarse, green-gray, friable, crushed, thickly bedded, strong odor, stained (Livermore Gravels)
60			20		SILTSTONE, orange-gray-brown, friable, crushed, thickly bedded, no detectable odor (Livermore Gravels)

PLATE 3

BERLOGAR GEOTECHNICAL CONSULTANTS

# BORING LOG MV-2

JOB NUMBER: 1613.001      DATE DRILLED: 7-30-90

JOB NAME: Moller Property      SURFACE ELEVATION: 417.08 feet

DRILL RIG: Hollow Stem Auger      DATUM: Alameda County

SAMPLER TYPE: 2.5 inch I. D. Split Barrel      DRIVE WEIGHT - LB: 140      HEIGHT OF FALL - IN: 30

BLOWS PER FT.	MOISTURE CONTENT %	DRY UNIT WEIGHT p.c.f.	DEPTH IN FEET	USCS CLASSIFICATION	DESCRIPTION
			5	CL/CH	SILTY CLAY, dark brown, moist, very stiff, some fine sand, moderate plasticity
50/4"			10		SILTSTONE, mottled gray and brown, friable, crushed, thickly bedded (Livermore Gravels)
85			15		SANDSTONE, coarse, orange-brown, friable, crushed, thickly bedded (Livermore Gravels)
60/6"			20		
50/6"					

# BORING LOG MW-3

**JOB NUMBER:** 1613.001 **DATE DRILLED:** 7-31-90  
**JOB NAME:** Moller Property **SURFACE ELEVATION:** 419.40 feet  
**DRILL RIG:** Hollow Stem Auger **DATUM:** Alameda County  
**SAMPLER TYPE:** 2.5 inch I. D. Split Barrel **DRIVE WEIGHT - LB** 140 **HEIGHT OF FALL - IN** 30

BLOWS PER FT.	MOISTURE CONTENT %	DRY UNIT WEIGHT p.c.f.	DEPTH IN FEET	USCS CLASSIFICATION	DESCRIPTION
				CL / CH	SILTY CLAY, dark brown, wet, medium stiff, moderate plasticity (FI)
				CL	SILTY CLAY, orange-brown, wet, stiff, some fine- to coarse-grained sand and fine gravel, low plasticity
			5		SANDSTONE, fine, orange-gray-brown, friable, crushed, thickly bedded, some coarse-grained sand (Livermore Gravels)
70					SILTSTONE, orange-gray-brown, friable, crushed, thickly bedded (Livermore Gravels)  at 8 feet, cutting vapors read 64 ppm with OVM
			10		
57					at 14 feet, cutting vapors read 1110 ppm with OVM
			15		
68					at 16 feet, some fine gravel
			20		
50/6"					CONGLOMERATE, fine, gray-orange-brown, friable, crushed, thickly bedded (Livermore Gravels) at 18 feet, cutting vapors read 435 ppm with OVM  at 20 feet, sample vapors read less than 1 ppm with OVM

# BORING LOG MW-4

**JOB NUMBER:** 1613.001 **DATE DRILLED:** 7-31-90  
**JOB NAME:** Moller Property **SURFACE ELEVATION:** 418.36 feet  
**DRILL RIG:** Hollow Stem Auger **DATUM:** Alameda County  
**SAMPLER TYPE:** 2.5 inch I. D. Split Barrel **DRIVE WEIGHT - LB** 140 **HEIGHT OF FALL - IN** 30

BLOWS PER FT.	MOISTURE CONTENT %	DRY UNIT WEIGHT p.c.f.	DEPTH IN FEET	USCS CLASSIFICATION	DESCRIPTION
				CH	SILTY CLAY, dark brown, moist, medium stiff, high plasticity
64			5		SILTSTONE/SANDSTONE, fine, orange-gray-brown, friable, crushed, thickly bedded (Livermore Gravels)  OVM reading = 25 ppm
60			10		CONGLOMERATE, fine, orange-gray-brown, friable, crushed, thinly bedded, stained (Livermore Gravels) OVM reading = 450 ppm  SILTSTONE, orange-brown-gray, friable, crushed, thickly bedded (Livermore Gravels) at 11.5 feet, OVM reading = 36 ppm
50			15		OVM reading = 533 ppm
			20		CONGLOMERATE, fine, orange-brown, friable, crushed, thinly bedded (Livermore Gravels)  SILTSTONE, gray-brown, friable, crushed, thickly bedded (Livermore Gravels) OVM reading = 25 ppm

# BORING LOG MW-5

**JOB NUMBER:** 1613.001 **DATE DRILLED:** 8-1-90  
**JOB NAME:** Moller Property **SURFACE ELEVATION:** 407.73 feet  
**DRILL RIG:** Hollow Stem Auger **DATUM:** Alameda County  
**SAMPLER TYPE:** 2.5 inch I.D. Split Barrel **DRIVE WEIGHT - LB** 140 **HEIGHT OF FALL - IN** 30

BLOWS PER FT.	MOISTURE CONTENT %	DRY UNIT WEIGHT p.c.f.	DEPTH IN FEET	USCS CLASSIFICATION	DESCRIPTION
			5	ML	CLAYEY SILT, dark brown, dry, medium stiff, some fine to coarse grained sand, some fine gravel, low plasticity  below 2.5 feet, moist to wet
40			6		SILTSTONE, mottled gray and orange-brown, friable, crushed, thickly bedded (Livermore Gravels)  at 6 feet, OVM reading = 0 ppm
48			8.5		CONGLOMERATE, fine, blue-gray-orange-brown, friable, crushed, thickly bedded, stained (Livermore Gravels)  at 8.5 feet, OVM reading = 45 ppm  at 11 feet, OVM reading = 2632 ppm
54			15		at 15 feet, no staining, yellow-brown, clay matrix  OVM reading = 70 ppm
58			20		SILTSTONE, yellow-brown, friable, crushed, thickly bedded, gray stains on fractures (Livermore Gravels)  OVM reading = 0 ppm

**BORING LOG** MW-6

**JOB NUMBER:** 1613.003 **DATE DRILLED:** 5-4-1993  
**JOB NAME:** Moller Property - Lot 14A **SURFACE ELEVATION:** + 404 feet  
**DRILL RIG:** Hollow Stem Auger **DATUM:** Mean Sea Level  
**SAMPLER TYPE:** 2.5 Inch I.D. Split Barrel **DRIVE WEIGHT - LB** 140 **HEIGHT OF FALL - IN** 30

BLOWS PER FT.	MOISTURE CONTENT %	DRY UNIT WEIGHT p.c.f.	DEPTH IN FEET	USCS CLASSIFICATION	DESCRIPTION
28	-	-		CL	SANDY CLAY, gray-brown, dry, very stiff, fine-grained sand, some silt Organic Vapor Detector (O.V.D.) reading: 0.0 ppm
17	-	-	5	CL	SANDY CLAY, light gray-brown, moist to wet, stiff, fine to medium-grained sand, trace fine gravel O.V.D. reading: 0.0 ppm
55	-	-	10	CL	SILTY CLAY, light gray-brown, moist, hard, trace fine-grained sand, dark brown mottling O.V.D. reading: 0.0 ppm  below 13 feet, trace fine gravel
60 6'	-	-	15		O.V.D. reading: 0.0 ppm
65 6'	-	-	20	CL	SANDY CLAY, mottled light gray-brown and light yellow-brown, moist, hard, fine to medium-grained sand, trace fine gravel O.V.D. reading: 0.0 ppm

Clayton Environmental Consultants, Inc.  
**LOG OF EXPLORATORY BORING**

PROJECT NO 20-98-240 DATE 4/2/98  
 CLIENT \_\_\_\_\_  
 LOCATION Melley Ranch  
 LOGGED BY Mike DRILLER Greg

BORING NO. 0357  
 Sheet 1 of 1

Field location of boring:

Drilling method WBA  
 Hole Dia. 2 1/2"  
 Casing Installation Date \_\_\_\_\_

Ground Elev. \_\_\_\_\_ Datum \_\_\_\_\_

Drilling Rate FT/MIN	PID OVA	Depth Feet	Soil Group Symbol (UCS)	Litho- graphic Symbol	Water Level		DESCRIPTION
					Time	Date	
		0					Silty Brown topsoil
		5		Fill			Silty Gravel, Grey; Baserock Fill Hard.
		10		ML			Geo cloth @ 8' bgs Clayey Silt (ML); yel brown soft
		15		Cgl/ Sst			Alternating Siltstone / Conglomerate v. hard
		20					
		25					
		30					Water rose to 28' bgs
		30					Borehole back filled with neat cement / 5% bentonite grout.



Clayton Environmental Consultants, Inc.

### LOG OF EXPLORATORY BORING

PROJECT NO. 70-98-21.00 DATE 4/2/98

BORING NO. 2107

CLIENT \_\_\_\_\_

Sheet 1 of 1

LOGGED BY WBC DRILLER Gregg

Field location of boring:

Drilling method HSA

Hole Dia. 4"

Casing Installation Data \_\_\_\_\_

Ground Elev. \_\_\_\_\_

Datum \_\_\_\_\_

Drilling Rate FT/MIN	PID OVA	Depth	Soil Group Symbol (uses)	Litho- graphic Symbol	Water Level			DESCRIPTION
					Time			
					Date			
		5		ML				SILT (ML); yellow brown; soft.
		10						
		15		Sst/ Sist				Alternating Siltstone/Sandstone Very Hard -
		20						
				TDR 20				Y. silt to recharge water rose to 19' bgs
								Basehole back filled with neat cement 15% bentonite grout

Clayton Environmental Consultants, Inc.

### LOG OF EXPLORATORY BORING

PROJECT NO. 10-98-010 DATE 4-2-98  
 CLIENT \_\_\_\_\_  
 LOCATION Moller Ranch  
 LOGGED BY WBC DRILLER Gregg

BORING NO. 0153  
 Sheet 1 of 1

Field location of boring:

Drilling method HSA Hole Dia 4"  
 Casing Installation Data \_\_\_\_\_

Ground Elev. \_\_\_\_\_ Datum \_\_\_\_\_

Drilling Rate FT/MIN	PID OVA	Depth ft	Sample #	Soil Group Symbol (usec)	Litho- graphic Symbol	Water Level		DESCRIPTION
						Time	Date	
					ML			SILT (ML); BROWN (10YR 4/3) SOFT MOIST
		5			ML			Clayey SILT (ML); yellow brown; soft; minor rounded gravel
		10			Sct Cgl.			GREY SANDSTONE / CONGLOMERATE hard rock; slow drilling
		15		TD	e15'			Water rose to 11.6' bgs
								Base hole back filled with neat cement 15% bentonite grout.

Clayton Environmental Consultants, Inc.

### LOG OF EXPLORATORY BORING

PROJECT NO. 72-9831.00 DATE 4-2-98  
 CLIENT \_\_\_\_\_  
 LOCATION Moller Ranch  
 LOGGED BY WRC DRILLER Gregg  
 Drilling method HSA Hole Dia. 4"  
 Casing Installation Data \_\_\_\_\_

BORING NO. CB-4  
 Sheet 1 of 1

Field location of boring:

Ground Elev. Datum

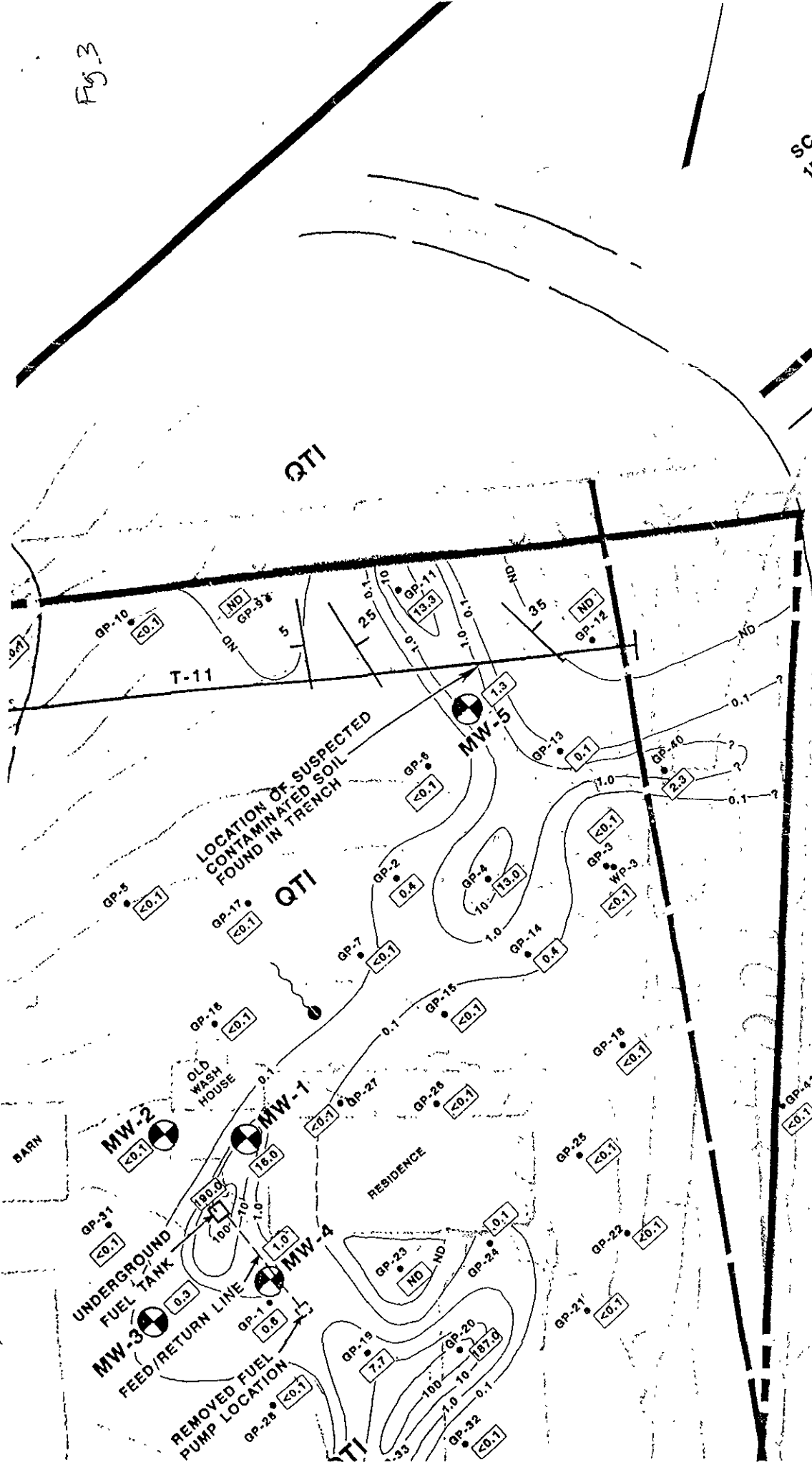
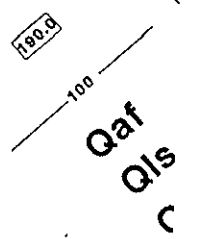
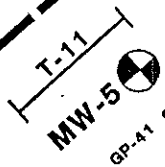
Drilling Rate FT/MIN	PID OVA	Depth ft	Sample	Soil Group Symbol (USCS)	Litho- graphic Symbol	Water Level		DESCRIPTION
						Time	Date	
					ML			SILT (ML); <u>yel brown, soft.</u>
		5						
		10						
		15			Cgl.			<u>Conglomerate; v. Hard; slow drilling</u>
		20						
		25						
					TDe 25'			<u>Water v. slow to enter borehole water rose to 24' bgs</u>
								<u>Borehole back filled with neat cement 15% bentonite cement</u>

Fig. 3

SCALE  
1" = 30'

### EXPLANATION

- PROPERTY BOUNDARY
- GEOLOGIC CONTACT, DASHED WHERE APPROXIMATE
- FAULT
- EXPLORATION TRENCH LOCATION
- MONITORING WELL LOCATOR
- SOIL GAS PROBE LOCATOR
- WATER PROBE LOCATOR
- TPH-G OF PPM



*1000 ppm Trityl in soil gas sample*

## FOOTHILL BOULEVARD

Qaf  
QIs  
C