

SOIL AND GROUNDWATER INVESTIGATION

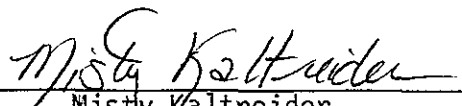
901 LINCOLN AVENUE
ALAMEDA, CALIFORNIA

December 1992

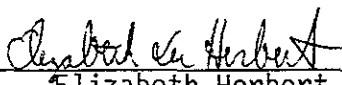
Prepared for:
Mr. Steve Chrissanthos
Alameda Cellars
1702 Lincoln Avenue
Alameda, CA 94501

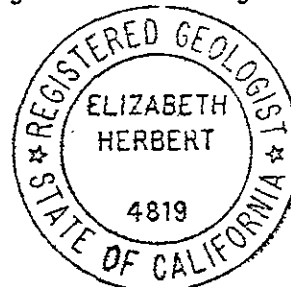
Prepared by:

Prepared by:


Misty Kaltreider,
Project Geologist

Reviewed by:


Elizabeth Herbert, R.G.
Registered Geologist



December 29, 1992

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

RE: Monitoring Well Construction and Groundwater Sampling at
901 Lincoln Avenue, Alameda, California
Permit No. 92621

Dear Mr. Chrissanthos:

Thank you for providing ACC with the opportunity to present this report. The attached report describes the materials and procedures used during drilling, and sampling for one boring and the installation of three monitoring wells located at 901 Lincoln Avenue, Alameda, California.

ACC's investigative approach was to drill four borings and convert three of them into groundwater monitoring wells. This work was performed to evaluate the lateral extent of soil contamination and to determine the presence or absence of residual hydrocarbon concentrations in groundwater.

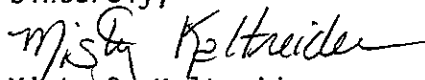
Soil samples collected during drilling were submitted to Geochem Environmental Laboratories for petroleum hydrocarbon analyses, in accordance with the "Tri Regional Guidelines for Underground Storage Tank Sites".

The results of the chemical analysis of the soil samples indicated elevated levels of Total Petroleum Hydrocarbons (TPH) as gasoline and Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) from one of the borings. Soil samples collected from the other borings indicated constituents below detectable levels.

Analysis of the groundwater samples from monitoring wells MW-1, MW-2 and MW-3 indicated non-detectable levels of the hydrocarbon constituents evaluated.

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

Sincerely,


Misty C. Kaltreider
Geologist

cc: Mr. Richard Hiett - Regional Water Quality Control Board
Ms. Juliet Shin - Alameda County Health Care Services - Division of
Hazardous Materials
Mr. Wyman Hong - Alameda County Flood Control and Water Conservation
District, Zone 7

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Figure 1	Site Plan
Figure 2	Groundwater Gradient 12/15/92
Figures 3 - 6	Log of Borings B-1, B-2, B-3 and B-4
Figure 7	Unified Soil Classification Chart
Figures 8 - 10	Well Construction Details for Wells MW-1, MW-2 and MW-3
Exhibit A	Chain of Custody Forms and Analytical Test Results
Exhibit B	Notes of Well Sampling
Exhibit C	Site Plan/Benchmark Description from Surveying Engineer

1.0 INTRODUCTION

This report presents the procedures and findings of a soil and groundwater investigation conducted by ACC Environmental Consultants, Inc., ("ACC") on behalf of Mr. Steve Chrissanthos and Alameda Cellars, site owner at 901 Lincoln Avenue, Alameda, California. The project objective, as described in the Work Plan prepared in July 1992, was to drill five soil borings to evaluate the extent of soil contamination. Three of the borings were converted into 2-inch diameter groundwater monitoring wells to determine if groundwater has been impacted from the previous underground storage of gasoline.

During the field investigation, four borings were drilled to evaluate the lateral extent of contamination. Due to the limited access, a fifth boring was not drilled. During drilling, groundwater was encountered at approximately 14 feet below ground surface. Three monitoring wells were completed to approximately 18 feet below ground surface. Groundwater samples from the wells were analyzed to determine what impact any release may have had on the groundwater.

2.0 BACKGROUND

The site is presently occupied by E-Z Liquors, a commercial liquor store. The property is owned by Mr. Steve Chrissanthos. On March of 1990, two 10,000-gallon gasoline tanks and one 2,000-gallon diesel tank 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.

Per request of Alameda County Health Care Services - Hazardous Materials Division, this preliminary Site Assessment was conducted to further evaluate the soil contamination from the gasoline release on-site.

ACC was retained by Mr. Chrissanthos, to perform the work requested by the Alameda County Health Care Services.

3.0 FIELD PROCEDURES

Borings B-1 through B-4 were drilled on December 4, 1992 using a B-53 mobile drill rig equipped with 6 to 8-inch outside diameter hollow-stem augers. Concurrent with drilling, subsurface soil samples were obtained with a Modified California Sampler equipped with three six-inch long brass liners. The sampler and brass liners were pre-cleaned prior to use and between sample drives by washing them with a trisodium phosphate (TSP) and potable water solution, a potable water rinse, and distilled water rinse. Soil samples were collected every five feet, at any noted changes in lithology, and at the approximate soil/groundwater interface. Subsurface soil samples were obtained by drilling to the approximate sampling location and then driving the sampler eighteen inches into undisturbed material.

Soil samples and drill cuttings were prescreened for volatile organic compounds with a photoionization detector (PID) calibrated for benzene. Upon removal from the sampler, each end of the brass liner was covered with Teflon tape and plastic caps, labeled, and stored in an ice-filled cooler to be transported under chain of custody to Geochem Environmental Laboratories, a Cal-EPA certified laboratory.

A minimum of two soil samples were selected from each boring and submitted to Geochem Environmental Laboratories of San Jose, California for analysis according to the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites", dated August 10, 1990. Samples from the borings were submitted for analysis for Total Petroleum Hydrocarbons (TPH) as gasoline by EPA test method 5030 and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA test method 8020. Copies of the analytical results and chain of custody forms are provided in Exhibit A.

The soil cuttings and samples were logged by an ACC geologist during drilling operations. Lithologic logs of the borings are shown in Figures 3 through 6, respectively. The soil cuttings are described in accordance with the Unified Soil Classification System, as shown in Figure 7. Soil cuttings were stored on-site and covered with visqueen.

3.1 Monitoring Well Construction and Development

Monitoring wells MW-1, MW-2 and MW-3 were installed within the borings B-2, B-3 and B-1, respectively, upon completion of drilling. Well construction details are presented in Figures 8 - 10. Monitoring Wells MW-2 and MW-3 were installed with well casings consisting of 2-inch I.D. Schedule 40 PVC with 10 feet of 0.020-inch factory slotted screen below 8 feet of solid casing. Monitoring well MW-1 was installed with well casing consisting of 2-inch I.D. Schedule 40 PVC with 10 feet of 0.020-inch factory slotted screen below 5 feet of solid casing. } why?

The wells were installed with Lonestar #2/12 sand used as annular fill to at least 2 feet above the top of the screen. One foot of 1/4-inch pelletized bentonite was placed between the annular sand and neat cement seal. "Christy" boxes were cemented over the tops of the PVC casings and set slightly above grade to drain surface waters away from the well head. Locking expansion plugs with locks were placed on each well.

The wells were developed on December 7, 1992. During development, the wells were surged using a double-ended rubber O-ring stopper followed by pumping, using a precleaned downhole pump. The wells were developed until development water was clear and essentially free of fine material. Ten well casing volumes of water were removed from each well.

3.2 Groundwater Sampling

Groundwater samples were taken on December 15, 1992 from monitoring wells MW-1, MW-2, and MW-3. 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 below 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> 12/15/92	Elevation of Top of Casing-18.99 MSL 10.27	8.72
<u>Well No. MW-2</u> 12/15/92	Elevation of Top of Casing-19.03 MSL 10.14	8.89
<u>Well No. MW-3</u> 12/15/92	Elevation of Top of Casing-19.35 MSL 10.44	8.91

Notes:

All measurements in feet
MSL = Mean Sea Level

After water-level measurements were taken, each on-site 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. Four well volumes were removed to purge each well. See Exhibit B for worksheets of groundwater conditions monitored during purging.

After the groundwater had recovered to a minimum of approximately 80 percent of its static level, water samples were obtained using the designated disposable Teflon bailer for each 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 Geochem Environmental Laboratories under chain of custody protocol (see Exhibit A for laboratory results and chain of custody).

4.0 FINDINGS

4.1 Subsurface Conditions

During drilling and sampling activities, the site was observed to be covered with a baserock/asphalt cap. Below the cap, the subsurface soils consisted of brown fine grain sand to the depth investigated of 18 feet below ground surface (bgs). The sand is part of the Merritt Sand.

A report by the Alameda County Flood Control and Water Conservation District Geohydrology and Groundwater - Quality Overview, East Bay Plain Area, Alameda County, California, 205 (J) Report, June 1988, describes the Merritt Sand as consisting of loose well-sorted, fine to medium grained sand and silt, with lenses of sandy clay and clay. The sand was a wind and water deposited beach and near-shore deposit and is exposed only in the Alameda and Oakland areas.

Groundwater was encountered at approximately 14 feet bgs during drilling. Borings B-1 and B-3 were drilled to approximately 18 feet bgs. Borings B-2 and B-4 were drilled to approximately 15 feet bgs. Monitoring wells MW-3, MW-1 and MW-2 were completed at the drilled depths within borings B-1, B-2 and B-3, respectively.

*copy
different
depths?*

An HNu photoionization detector (PID) was used during drilling and sampling procedures to detect field evidence of volatile hydrocarbons in the soil. Up to 300 ppm of volatile hydrocarbons was detected in the soil from 8 to 13 feet bgs in the boring B-2. This layer was also observed to be discolored. No field evidence of volatile organics was detected from the other borings.

4.2 Analytical Results - Soil

Analysis of soil collected from eleven feet bgs from boring B-2 indicated elevated levels of Total Petroleum Hydrocarbons (TPH) as gasoline with BTEX. Analysis of soil from borings B-1, B-3 and B-4 indicated below detectable levels of TPH as gasoline with BTEX. Levels of TPH as gasoline with BTEX found from each sample are illustrated below.

TABLE 2
Analytical Results - Soil

Boring	Sample Number	Depth (feet)	TPH-gasoline (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylenes (mg/Kg)
B-1 (MW-3)	B1-11	11	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	B1-16	16	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
B-2 (MW-1)	B2-6	6	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	B2-11	11	55.96	1.6529	2.0016	6.5195	6.4000
	B2-16	16	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
B-3 (MW-2)	B3-6	6	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	B3-11	11	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
B-4	B4-6	6	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	B4-11	11	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

Notes: mg/Kg = parts per million (ppm)

4.3 Analytical Results - Groundwater

After well installation and development, one groundwater sample from each on-site groundwater monitoring well was collected and submitted to Geochem Environmental Laboratories 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 illustrated below. Copies of the analytical results are provided in Exhibit A.

TABLE 3
Analytical Results - Groundwater

Monitoring Well Number	TPH-gasoline (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)
MW-1	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
MW-3	<0.05	<0.0005	<0.0005	<0.0005	<0.0005

Notes:

mg/L = milligrams per liter (ppm)

4.4 Groundwater Gradient

Prior to calculating the groundwater gradient, elevations for the on-site 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 Ninth Street and Pacific Avenue in Alameda, California. A site map and benchmark description from the surveying engineer is provided in Exhibit C.

The groundwater gradient was calculated from the on-site monitoring wells. The location of the wells is shown on Figure 1 - Site Plan. Groundwater elevations were taken from the wells on December 15, 1991. The gradient was evaluated by triangulation using the elevation of the potentiometric surface measured with respect to Mean Sea Level datum. As shown in Figure 2, the groundwater gradient direction was west southwest flowing at approximately 0.00175 foot per foot.

5.0 CONCLUSION

The data and observations discussed herein indicate that groundwater has not been impacted due to an unauthorized hydrocarbon release. The analytical parameters used for sampling performed in December 1992, were in accordance with the "Tri-Regional Water Quality Control Boards Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites", dated August 10, 1990, for gasoline tanks.

Low levels of Total Petroleum Hydrocarbons (TPH) as gasoline with BTEX were found in the soil sample collected at 11 feet bgs from boring B-2. Soil staining was observed in boring B-2 from 8 to 13 feet below ground surface. It appears that the lateral extent of impacted soil may extend westward beyond monitoring well MW-1, however, due to the limited accessibility of the site, an additional boring was not performed. Additional borings may be drilled using a pneumatic sampling device.

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

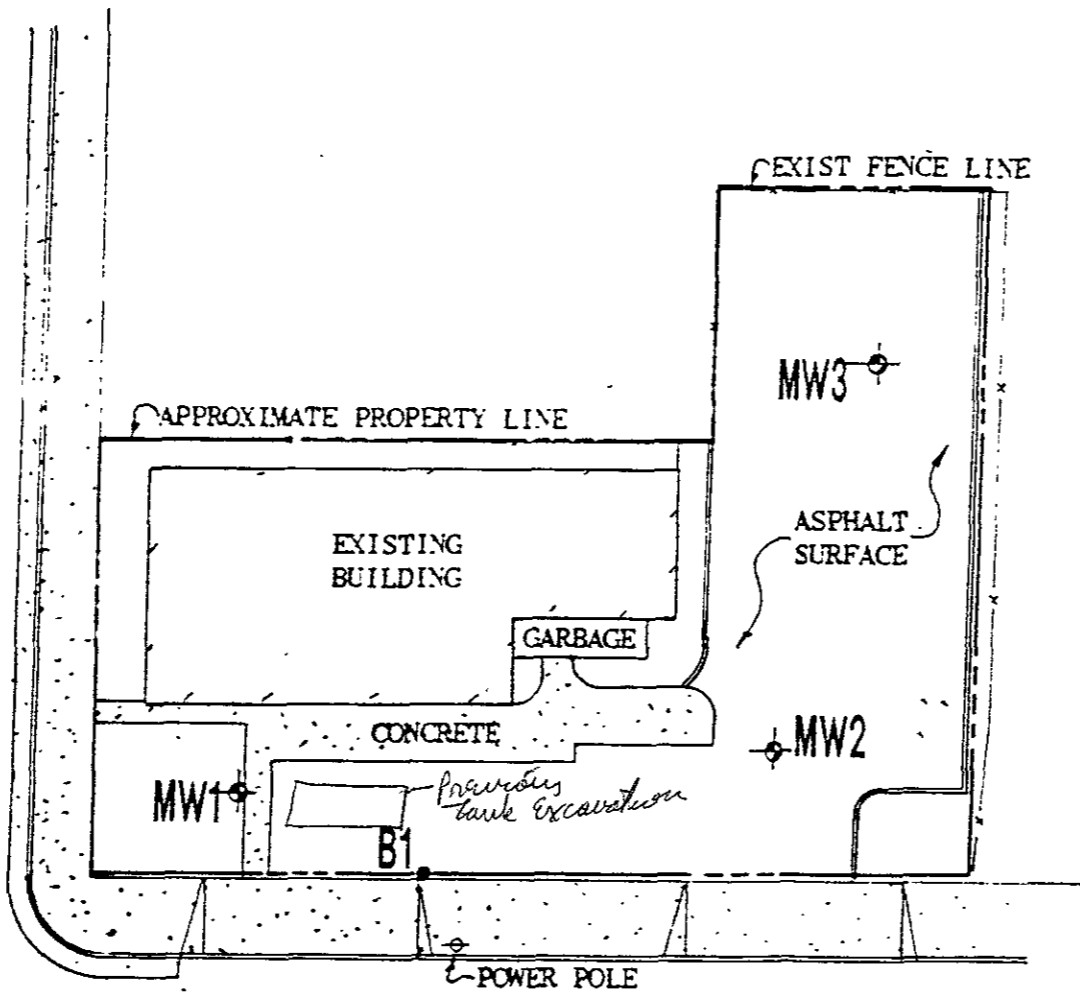
BENCHMARK:

FOUND CHISELED SQUARE IN TOP OF CURB AT THE NORTH
END OF CURB RETURN, NORTHWEST CORNER OF INTERSECTION
AT NINTH STREET AND PACIFIC AVENUE. ELEVATION TAKEN
AS 15.17 M.S.L.

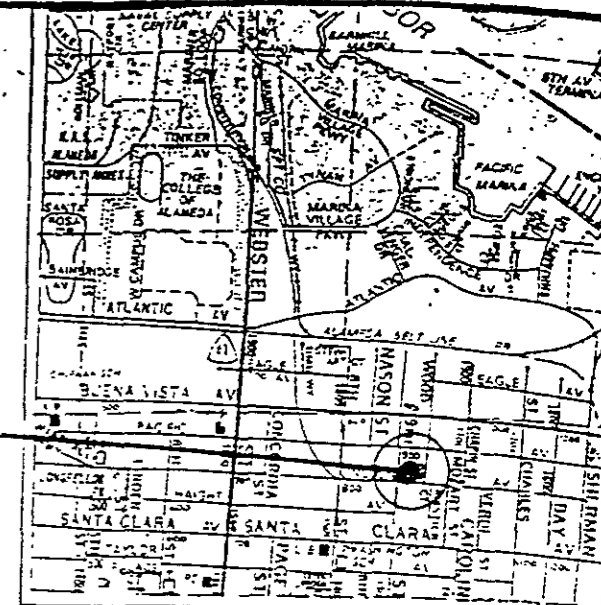
NOTE: REVISED TO CHANGE ELEVATION DATUM TO M.S.L.



NINTH STREET



SITE



VICINITY MAP
N.T.S

MONITOR WELL DATA TABLE

WELL DESIGNATION	ELEV	DESCRIPTION
MW1	18.99 19.44	TOP OF PVC CASING TOP OF BOX
MW2	19.03 19.42	TOP OF PVC CASING TOP OF BOX
MW3	19.35 19.83	TOP OF PVC CASING TOP OF BOX
B1	19.38	GROUND

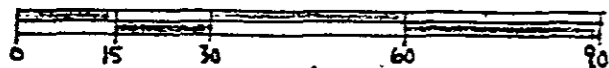
* REVISED DECEMBER 9, 1992
DECEMBER 8, 1992

JOB NO. 1982

PLAT SHOWING EXISTING MONITOR WELLS AT THE EZ LIQUOR STORE.
LOCATED AT 901 LINCOLN AVENUE AT NINTH STREET, CITY OF
ALAMEDA, ALAMEDA COUNTY, CALIFORNIA

FOR: ACC ENVIRONMENTAL CONSULTANTS, INC.
PROJECT NO. 6839-2

1" = 30'



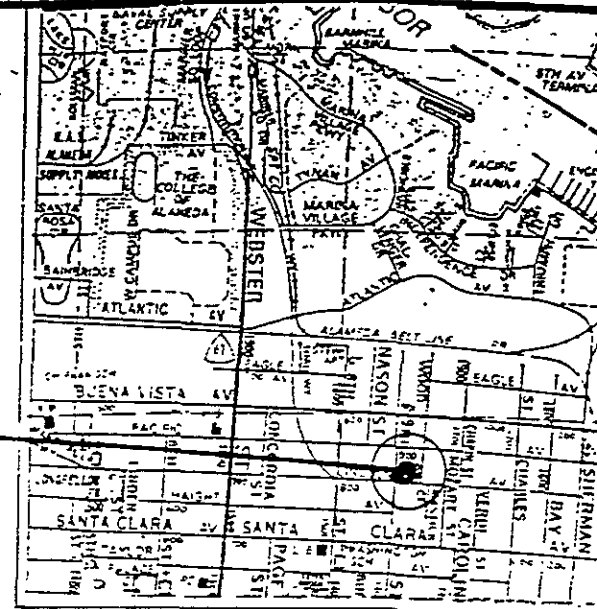
Graphic Scale
In feet



Figure 1
Site Plan

BENCHMARK:
 FOUND CHISELED SQUARE IN TOP OF CURB AT THE NORTH
 END OF CURB RETURN, NORTHWEST CORNER OF INTERSECTION
 AT NINTH STREET AND PACIFIC AVENUE. ELEVATION TAKEN
 AS 15.17 M.S.L.

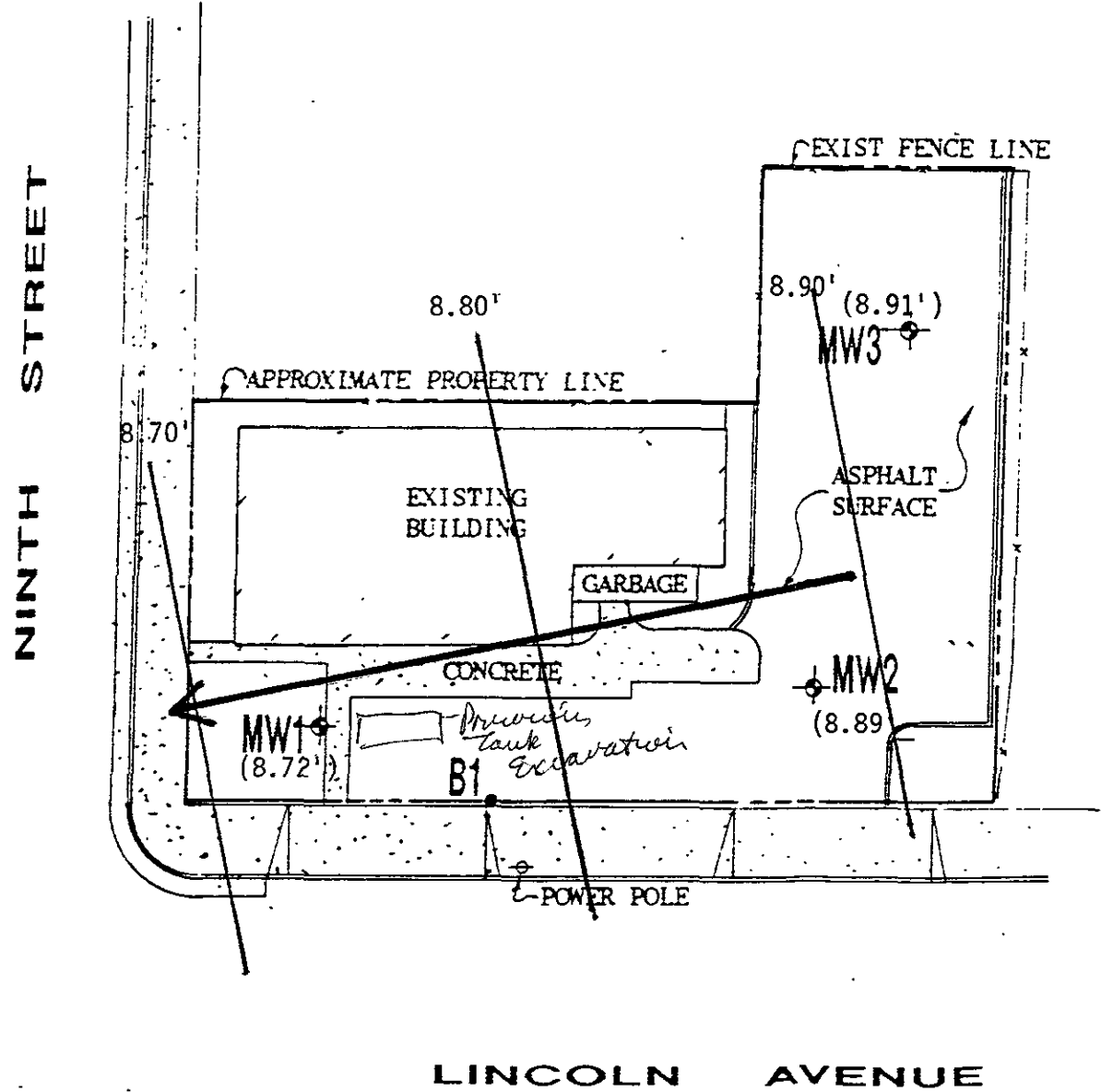
NOTE: REVISED TO CHANGE ELEVATION DATUM TO M.S.L.



VICINITY MAP
 N.T.S



SITE



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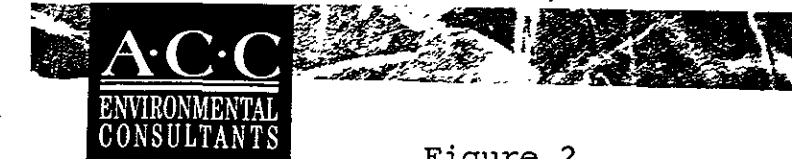
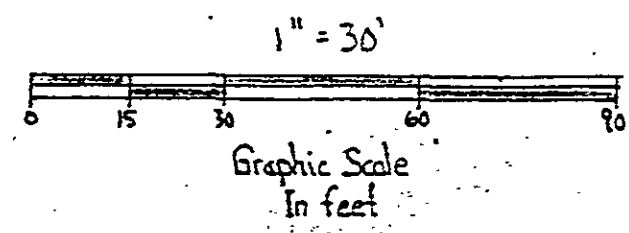
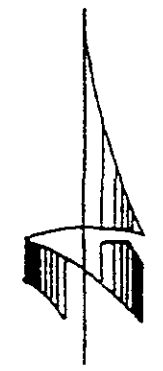


Figure 2
 Groundwater Gradient 12/15/92



Advanced, Inc. B-61 Drill Rig.	HNu (ppm)	Blows/6 in.	SAMPLE #	Sample Int.	Depth (feet)	Equipment: Hollow Stem Auger Logged By: M. Kaltreider PROJECT: 901 Lincoln Avenue Start Date: 12/4/92	
Soil color described using Munsell soil color charts <u>Color code</u> (2.5Y - 5/6) (2.5Y - 5/6) (2.5Y - 5/6)	0	12	B1-6		0 2 4 6 8 10 12 14 16 18 20 22 24 26 28	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained, dense (baserock) Lt. olive brown sand (SP), moist, medium dense. (Merritt Sand). Same as above, wet. ▼ (groundwater 12/4/92) Same as above, saturated. --siltier--	
						<i>MW-3</i>	BOTTOM OF BORING @ 18 FEET (Converted into Monitoring Well MW-3)


ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVE UNUE, SUITE 110
ALAMEDA, CA 94501


JOB NO. 6039-2


LOG OF BORING B-1
901 Lincoln Avenue

DATE: 12/12/92

FIGURE: 3

Advanced, Inc. B-61 Drill Rig.	HNu (ppm)	Blows/6 in.	SAMPLE #	Sample Int.	Depth (feet)	Equipment: Hollow Stem Auger Logged By: M. Kaltreider PROJECT: 901 Lincoln Avenue Start Date: 12/4/92		
Soil color described using Munsell soil color charts <u>Color code</u> (2.5Y - 5/6-6/6) (5Y - 4/3) (2.5Y - 5/6)	0 300 0	3 6 16	<i>MW-1</i> B2-6 B2-11 B2-16		0 2 4 6 8 10 12 14 16 18 20 22 24 26 28	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained, dense (baserock) Lt. olive brown sand (SP). moist, medium dense. (Merritt Sand). Olive sand (SP), saturated, medium dense, strong odor. ▼ (groundwater 12/4/92) Brown sand (SP), saturated, medium dense. BOTTOM OF BORING @ 16.5 FEET (Converted into Monitoring Well MW-1)		
						ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO: 6039-2	LOG OF BORING B-2 901 Lincoln Avenue
							DATE: 12/12/92	FIGURE: 4

Advanced, Inc. B-61 Drill Rig.	HMU (ppm)	Blows/6 in.	SAMPLE #	Sample Int.	Depth (feet)	Equipment: Hollow Stem Auger Logged By: M. Kaltreider PROJECT: 901 Lincoln Avenue Start Date: 12/4/92		
Soil color described using Munsell soil color charts <u>Color code</u> (10YR - 5/6) (10YR - 4/6) (10YR - 4/6)	0 0 0	4 13 16	<i>MW-2</i> B3-6 B3-11 B3-16		0 2 4 6 8 10 12 14 16 18 20 22 24 26 28	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained, dense (baserock) Lt. brown sand (SP), moist, medium dense. (Merritt Sand). Same as above, wet. ▼ (groundwater 12/4/92) Same as above, saturated. --siltier-- BOTTOM OF BORING @ 18 FEET (Converted into Monitoring Well MW-2)		
						ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO: 6039-2	LOG OF BORING B-3 901 Lincoln Avenue
							DATE: 12/12/92	FIGURE: 5

Advanced, Inc. B-61 Drill Rig.	HNu (ppm)	Blows/6 in.	SAMPLE #	Sample Int.	Depth (feet)	Equipment: Hollow Stem Auger Logged By: M. Kaltreider PROJECT: 901 Lincoln Avenue Start Date: 12/4/92		
Soil color described using Munsell soil color charts <u>Color code</u> (10YR - 5/6) (10YR - 4/6) (10YR - 4/6)	0	9	B4-6		0 2 4 6 8 10 12 14 16 18 20 22 24 26 28	Asphalt: 4" lift. Lt. brown gravelly silt (GM) & gravelly clay (GC), med grained, dense (baserock) Lt. brown sand (SP), moist, medium dense. (Merritt Sand). Same as above, wet. ▼ (groundwater 12/4/92) Same as above, saturated. --siltier-- BOTTOM OF BORING @ 18 FEET		
						ACC ENVIRONMENTAL CONSULTANTS 1000 ATLANTIC AVEUNUE, SUITE 110 ALAMEDA, CA 94501	JOB NO: 6039-2	LOG OF BORING B-4 901 Lincoln Avenue
						DATE: 12/12/92	FIGURE: 6	

MAJOR DIVISIONS				TYPICAL NAMES		
COARSE GRAINED SOILS more than half > #200 sieve	GRAVELS more than half coarse fraction is larger than No. 4 sieve	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		well graded gravels, gravel-sand mixtures	
			GP		poorly graded gravels, gravel-sand mixtures	
		GRAVELS WITH OVER 12% FINES	GM		silty gravels, poorly graded gravel-sand silt mixtures	
			GC		clayey gravels, poorly graded gravel-sand clay mixtures	
		SANDS more than half coarse fraction is smaller than no. 4 sieve	CLEAN SANDS WITH LITTLE OR NO FINES	SW		well graded sands, gravelly sands
				SP		poorly graded sands, gravelly sands
SANDS WITH OVER 12% FINES	SM			silty sands, poorly graded sand-silt mixtures		
	SC			clayey sands, poorly graded sand-clay mixtures		
FINE GRAINED SOILS more than half < #200 sieve	SILTS AND CLAYS liquid limit less than 50	ML		inorg. silts and v.fine sands, rock flour silty or clayey sands, or clayey silts w/sl. plasticity		
		CL		inorg. clays of low-med plasticity, gravelly clays, sandy clays, silty clays, lean clays		
		OL		organic clays and organic silty clays of low plasticity		
	SILTY AND CLAYS liquid limit greater than 50	MH		inorganic silty, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
		CH		inorganic clays of high plasticity, fat clays		
		OH		organic clays of medium to high plasticity organic silts		
HIGHLY ORGANIC SOILS	Pt		peat and other highly organic soils			

UNIFIED SOIL CLASSIFICATION SYSTEM

ACC ENVIRONMENTAL CONSULTANTS
1000 ATLANTIC AVEUNUE, SUITE 110
ALAMEDA, CA 94501

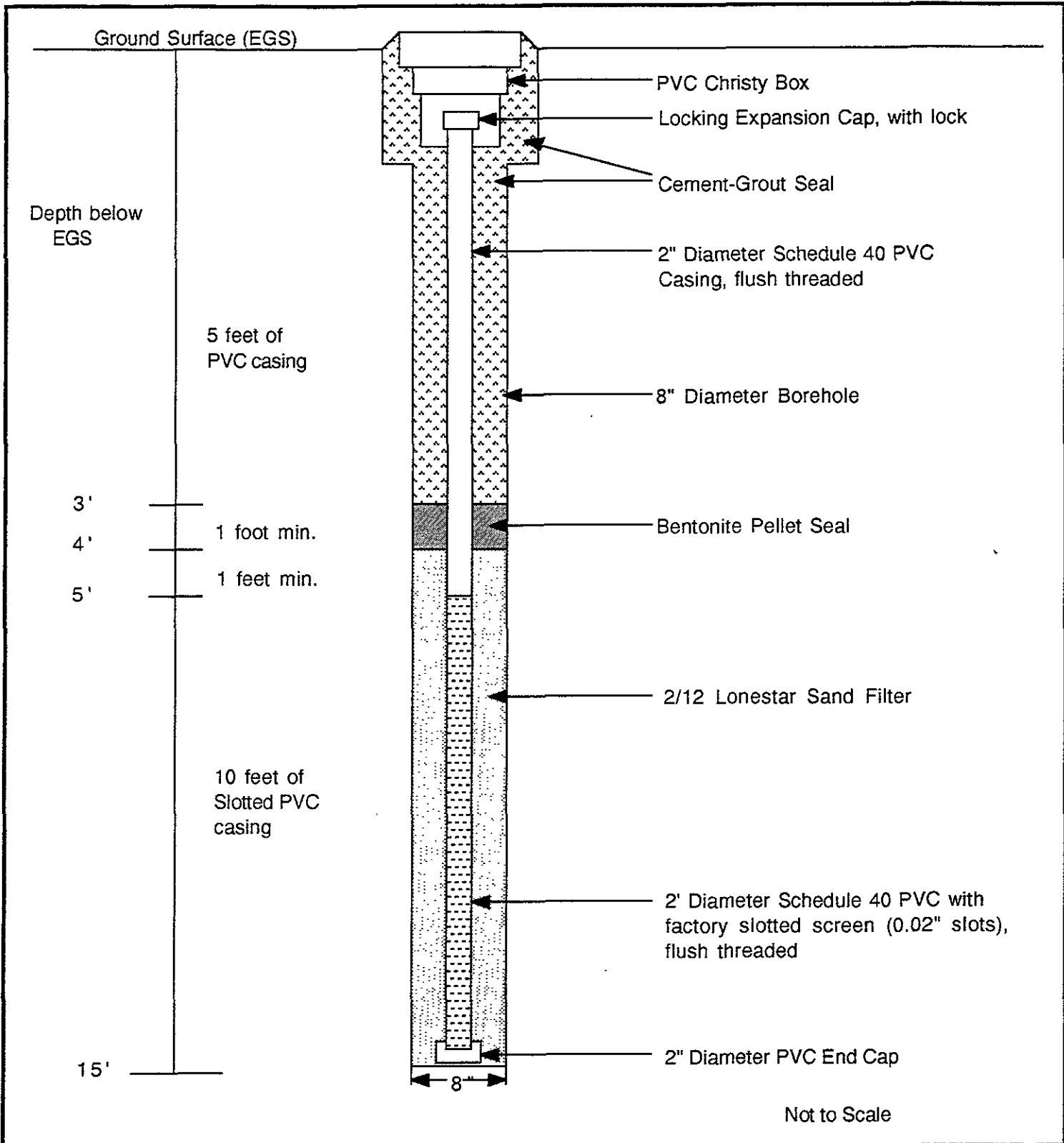
Soil Classification System

Project No. 6039-2

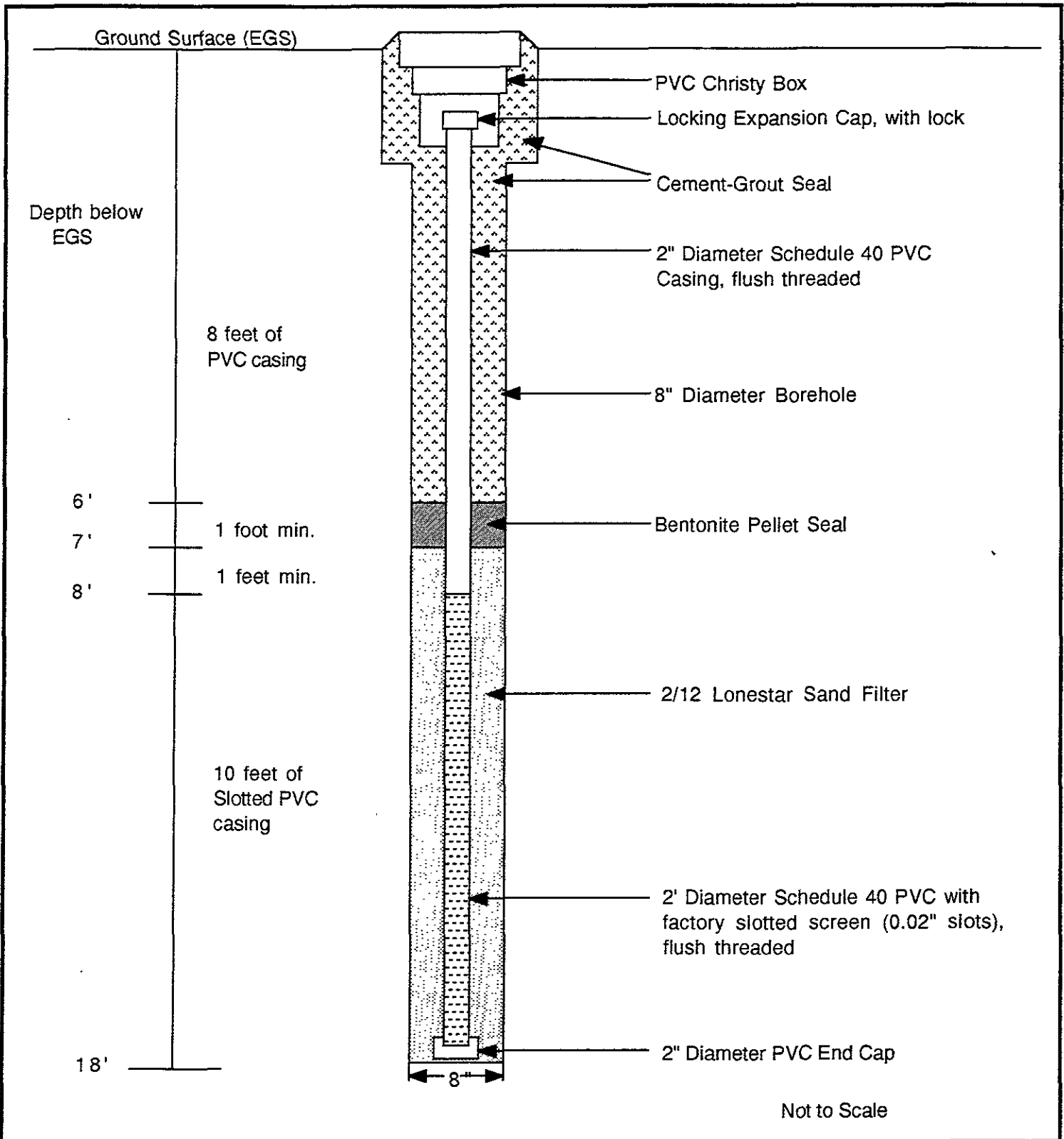
Date: 12/20/92

DRN: MCK

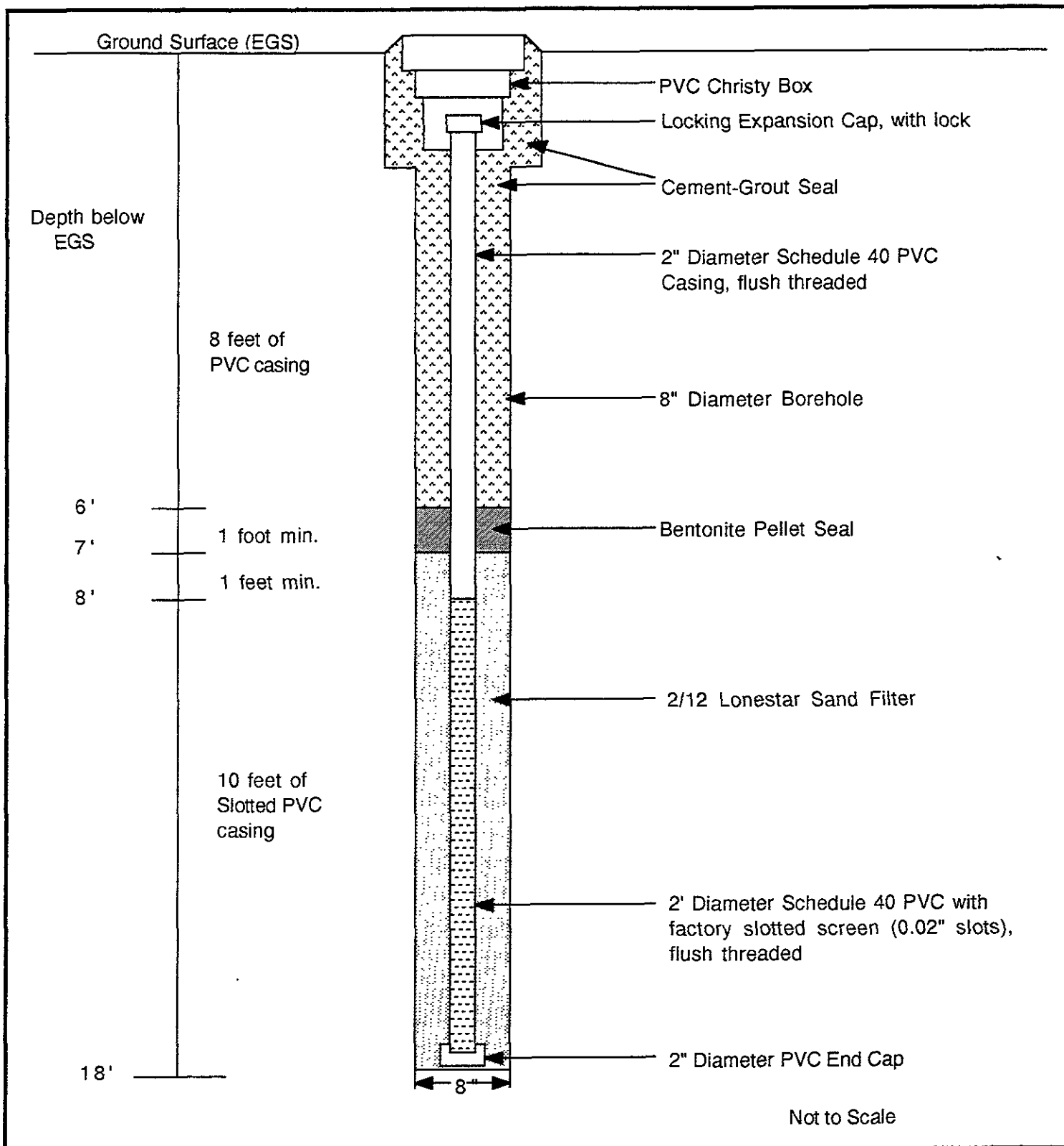
Figure No. 7



ACC Environmental Consultants 1000 Atlantic Avenue, Suite 110 Alameda, CA 94501	Job No.: 6039-2	Schematic of Monitoring Well No.: MW-1
	Date: 12/13/92	Figure No.: 8



ACC Environmental Consultants 1000 Atlantic Avenue, Suite 110 Alameda, CA 94501	Job No.: 6039-2	Schematic of Monitoring Well No.: MW-2
	Date: 12/13/92	Figure No.: 9



ACC Environmental Consultants 1000 Atlantic Avenue, Suite 110 Alameda, CA 94501	Job No.: 6039-2	Schematic of Monitoring Well No.: MW-3
	Date: 12/13/92	Figure No.: 10

EXHIBIT A .



Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California

Phone: [408] 955-9988 / FAX: [408] 955-9538

ANALYTICAL REPORT

Page: 1 of 1

Client: ACC Environmental
1000 Atlantic Ave.
Alameda, CA 94501
Attn: Misty Kaltreider

Date Sampled: 12/15/92
Date Received: 12/16/92
Date Analyzed: 12/16/92
Batch:SD-052 Matrix: Water
Conc. Unit ug/kg(ppb)

Project: 901 Lincoln

"ND" means "not detected" at indicated detection limit.

B:benzene, T:toluene, E:ethylbenzene & X:total xylenes.

Samples received chilled with a chain of custody record.

SAMPLE I.D.	8015M/TPH				602			
	Gasoline	B	/	T	/	E	/	X
DETECTION LIMIT	50 ppb	0.5 ppb						
MW-1	ND	ND	/	ND	/	ND	/	ND
MW-2	ND	ND	/	ND	/	ND	/	ND
MW-3	ND	ND	/	ND	/	ND	/	ND

Reviewed and approved by

George Tsai DEC. 18, 1992
George Tsai, Laboratory Director

TESTS REQUIRED

CLIENT <u>ACC Environmental.</u>		PROJECT NAME <u>901 Lincoln</u>	
ADDRESS <u>1000 ATLANTIC Ave., Suite 110</u>		PROJECT MANAGER <u>M. Kaltreider</u>	
<u>Alameda, CA. 94501</u>		PHONE NUMBER <u>(510) 522-8188</u>	

SAMPLE I.D.	LOCATION DESCRIPTION	DATE	TIME	MATRIX			NO. OF CTNR	418.1/TRPH	8010 (601)	8015 E/TPH-diesel	8015 M/TPH-gasoline	8020 (602) BTEX	7420/Total Lead	Organic Lead	Archive
				AIR	WATER	SOIL									
MW-1		12/15/92	4:35				2				X	X			
MW-2		↓	2:30				2				X	X			
MW-3		↓	3:45				2				X	X			

Sampled/Relinquished by: <u>Mista Kaltreider</u>	Received by: <u>J. W. Monroe</u>	Date <u>12/16/92</u>	Time <u>1:00P</u>
Relinquished by:	Received by:	Date	Time
Relinquished by:	Received by:	Date	Time
Turnaround time: 24 hr. 48 hr. <u>Normal (3-5 days)</u>	Special Instructions:		



Geochem ENVIRONMENTAL LABORATORIES

Mobile & In-House Laboratories Certified by State of California

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ANALYTICAL REPORT

Page: 1 of 1

Client: ACC Environmental
1000 Atlantic Ave.
Alameda, CA 94501
Attn: Misty Kaltreider

Date Sampled: 12/04/92
Date Received: 12/04/92
Date Analyzed: 12/07/92
Batch:SD-047 Matrix: Soil
Conc. Unit ug/kg(ppb)

Project: Alameda Cellars (901 Lincoln)

"ND" means "not detected" at indicated detection limit.
B:benzene, T:toluene, E:ethylbenzene & X:total xylenes.
Samples received chilled with a chain of custody record.

SAMPLE I.D.	8015M/TPH	8020			
	Gasoline	B	T	E	X
DETECTION LIMIT	50 ppb	0.5 ppb			
B1-11	ND	ND	ND	ND	ND
B1-16	ND	ND	ND	ND	ND
B2-6	ND	ND	ND	ND	ND
B2-11	55960	1652.9/	2001.6/	6519.5 /	6400.0
B2-16	ND	ND	ND	ND	ND
B3-6	ND	ND	ND	ND	ND
B3-11	ND	ND	ND	ND	ND
B4-6	ND	ND	ND	ND	ND
B4-11	ND	ND	ND	ND	ND

Reviewed and approved by

George Tsai, DEC. 08, 1992
George Tsai, Laboratory Director

TESTS REQUIRED

CLIENT ACC Environmental	PROJECT NAME Alameda Cellars. (901 Lincoln)
ADDRESS 1000 ATLANTIC AVE ALAMEDA, CA 94501	PROJECT MANAGER M. Kaltreider
	PHONE NUMBER (510) 522-8188

SAMPLE I.D.	LOCATION DESCRIPTION	DATE	TIME	MATRIX			NO. OF CTNR	418.1/TRPH	8010 (601)	8015 E/TPH-diesel	8015 M/TPH-gasoline	8020 (602) BTEX	7420/Total Lead	Organic Lead	Archive
				AIR	WATER	SOIL									
B1-11		12/4/92	8:35			X					X	X			
B2-6'			9:15								X	X			
B2-11			9:25								X	X			
B2-16			9:35								X	X			
B3-6			10:20								X	X			
B3-11			10:30								X	X			
B4-6			12:00								X	X			
B4-11			12:00								X	X			
B1-16			8:45								X	X			

Sampled/Relinquished by: <i>Misty Kaltreider</i>	Received by: <i>J. V. Monroe</i>	Date 12/04/92	Time 3:15 P
Relinquished by:	Received by:	Date	Time
Relinquished by:	Received by:	Date	Time
Turnaround time: 24 hr. 48 hr. <u>Normal (3-5 days)</u>	Special Instructions:		

TESTS REQUIRED

CLIENT <u>ACC Environmental.</u>		PROJECT NAME <u>901 Lincoln</u>	
ADDRESS _____ _____		PROJECT MANAGER <u>M. Koltreder</u>	
		PHONE NUMBER <u>510, 522-9188</u>	

SAMPLE I.D.	LOCATION DESCRIPTION	DATE	TIME	MATRIX			NO. OF CTNR	418.1/TRPH	8010 (601)	8015 E/TPH-diesel	8015 M/TPH-gasoline	8020 (602) BTEX	7420/Total Lead	Organic Lead			Archive	
				AIR	WATER	SOIL												
<u>MW-1</u>		<u>12/15/92</u>	<u>4:35</u>				<u>2</u>				<u>X</u>	<u>X</u>						
<u>MW-2</u>		<u>↓</u>	<u>2:30</u>				<u>2</u>				<u>X</u>	<u>X</u>						
<u>MW-3</u>		<u>↓</u>	<u>3:45</u>				<u>2</u>				<u>X</u>	<u>X</u>						

Sampled/Relinquished by: <u>M. Koltreder</u>	Received by: <u>27. Y. ...</u>	Date <u>12/16/92</u>	Time <u>1:00P</u>
Relinquished by:	Received by:	Date	Time
Relinquished by:	Received by:	Date	Time
Turnaround time: 24 hr. 48 hr. <u>Normal (3-5 days)</u>	Special Instructions:		

EXHIBIT B

Well Sampling Well Development

check one

Well Number: MW-1

4:35 PM

Job Number: 60

Job Name: 901 Lincoln Ave, Alameda Cellars

Date: 12/15/92

Sampler: Carl Soane

MSL
8.72'

Depth to Water (measured from TOC): 10.27'

Inside Diameter of Casing: 2"

Depth of Boring: 15'

Method of well development (circled): Purge

Amount of Water Bailed/Pumped from well: 3.3 gallons

Depth to Water after well development:

Depth to water prior to sampling: 10.70'

Bailed water stored on-site? How? Drums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope? New rope

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	7.10	4.90	65.2
10	7.15	4.92	65.8
15	7.11	4.96	66.9
20	7.10	4.98	67.0
25	7.15	4.97	67.2
30	7.09	4.97	67.1
35	7.11	4.99	67.1
40			
45			
50			

Well Sampling

Well Development

check one

Well Number: MW-2

Job Number: 60

Job Name: 901 Lincoln Ave Alameda Cellars

2:30 PM

Date: 12/15/92

Sampler: Carl Souza

Depth to Water (measured from TOC): 10.14'

Inside Diameter of Casing: 2"

Depth of Boring: 18'

Method of well development/purging: Purge

Amount of Water Bailed/Pumped from well: 5.2 gallons

Depth to Water after well development:

Depth to water prior to sampling: 10.70'

Bailed water stored on-site ? How ? Plums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New rope

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	7.10	4.33	68.6
10	6.95	4.22	67.0
15	6.98	4.22	66.9
20			
25			
30			
35			
40			
45			
50			

Well Sampling

Well Development

check one

Well Number: MW-3

3:45 AM

Job Number: 6039-1

Job Name: 901 Lincoln Ave.

Date: 12/15/92

Sampler: Carl Soane

Depth to Water (measured from TOC): 10.44'

Inside Diameter of Casing: 2"

Depth of Boring: 18'

Method of well development/purging: Purge

Amount of Water Bailed/Pumped from well: 5.2 gal

Depth to Water after well development: —

Depth to water prior to sampling: 11.00'

Bailed water stored on-site ? How ? Drums

Number of well volumes removed: 4

TSP wash, distilled rinse, new rope ? New Rope

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	ED	Temp
5	7.25	8.02	64.9
10	7.20	8.33	65.1
15	7.35	8.40	65.3
20	7.38	8.43	65.7
25	7.40	8.50	65.1
30	7.42	8.78	65.6
35	7.40	8.99	65.7
40	7.42	9.02	65.6
45			
50			

EXHIBIT C

RON ARCHER

CIVIL ENGINEER, INC.

CONSULTING • PLANNING • DESIGN • SURVEYING

4133 Mohr Ave., Suite E • Pleasanton, CA 94566
(510) 462-9372



DECEMBER 8, 1992

JOB NO. 1982

* REVISED DECEMBER 9, 1992

ELEVATIONS OF EXISTING MONITOR WELLS AT THE EZ LIQUOR STORE,
LOCATED AT 901 LINCOLN AVENUE AT NINTH STREET, CITY OF
ALAMEDA, ALAMEDA COUNTY, CALIFORNIA

FOR: ACC ENVIRONMENTAL CONSULTANTS, INC.
PROJECT NO. 6039-1

BENCHMARK:

FOUND CHISELED SQUARE IN TOP OF CURB AT THE NORTH
END OF CURB RETURN, NORTHWEST CORNER OF INTERSECTION
AT NINTH STREET AND PACIFIC AVENUE. ELEVATION TAKEN
AS 15.17 M.S.L.

NOTE: REVISED TO CHANGE ELEVATION DATUM TO M.S.L.

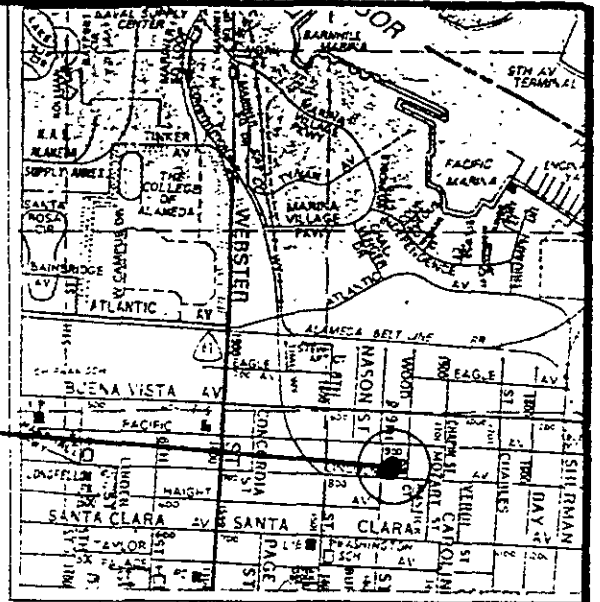
MONITOR WELL DATA TABLE

WELL DESIGNATION	ELEV	DESCRIPTION
MW1	18.99 19.44	TOP OF PVC CASING TOP OF BOX
MW2	19.03 19.42	TOP OF PVC CASING TOP OF BOX
MW3	19.35 19.83	TOP OF PVC CASING TOP OF BOX
B1	19.38	GROUND



NINTH STREET

SITE



VICINITY MAP
N.T.S

FOR WELL DATA TABLE

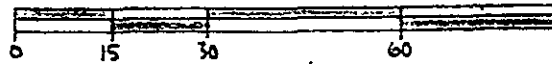
ELEV	DESCRIPTION
15.58	TOP OF PVC CASING
16.03	TOP OF BOX
15.62	TOP OF PVC CASING
16.01	TOP OF BOX
15.94	TOP OF PVC CASING
16.42	TOP OF BOX
15.97	GROUND

JOB NO. 1982

FOR WELLS AT THE EZ LIQUOR STORE,
CORNER OF NINTH STREET, CITY OF
ALAMEDA, CALIFORNIA

CONSULTANTS, INC.

1" = 30'



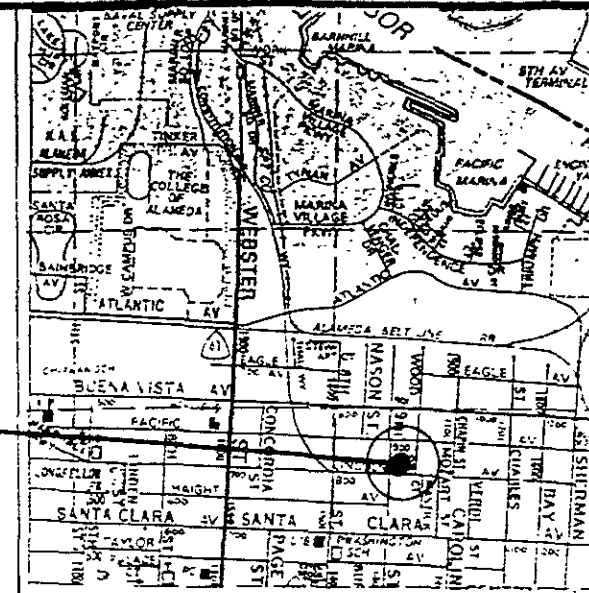
Graphic Scale
In feet

RON ARCHER
 CIVIL ENGINEER, INC.
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 Pleasanton, Ca. 94566
 phone (510) 462-8372



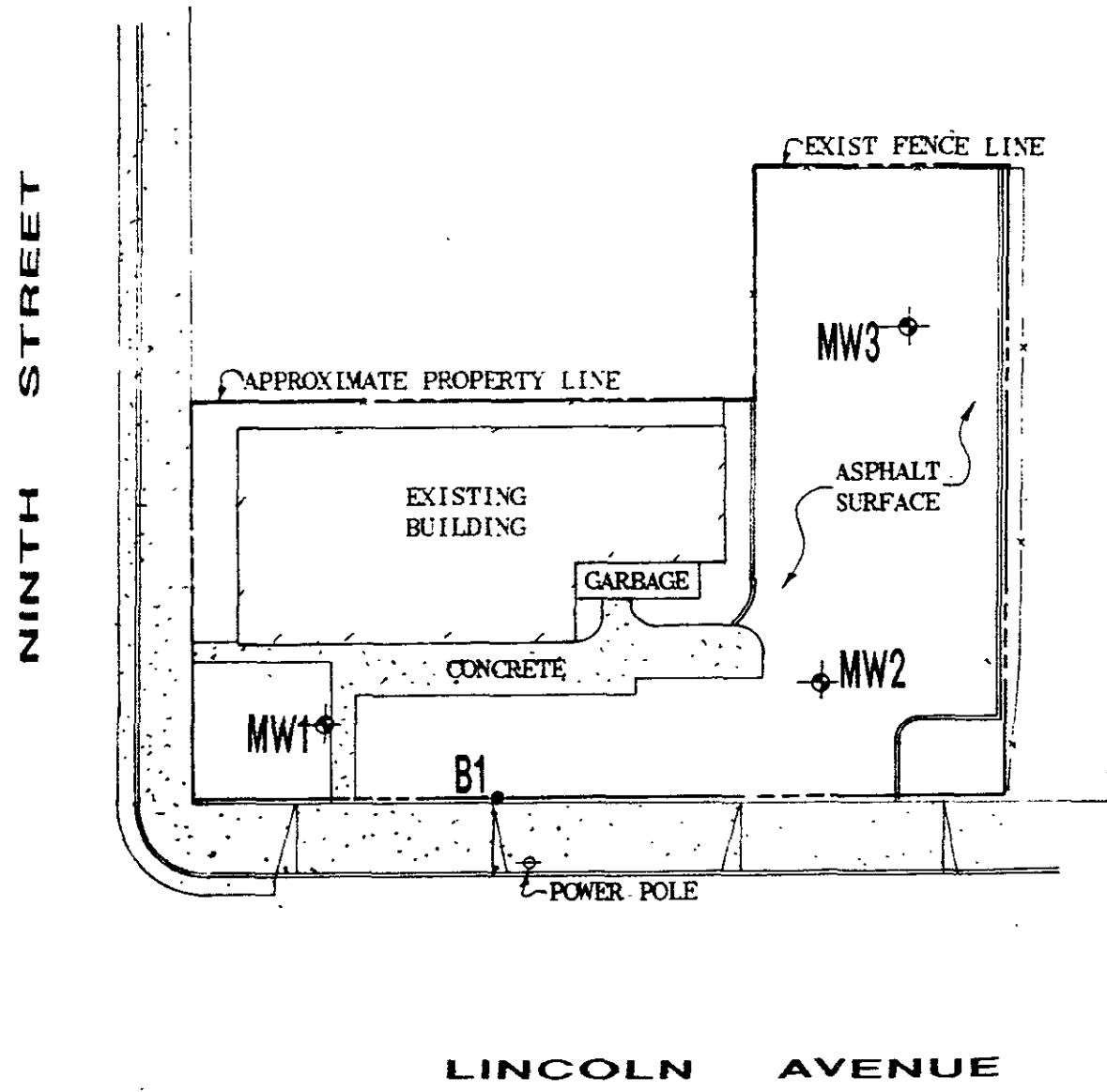
BENCHMARK:
 FOUND CHISELED SQUARE IN TOP OF CURB AT THE NORTH
 END OF CURB RETURN, NORTHWEST CORNER OF INTERSECTION
 AT NINTH STREET AND PACIFIC AVENUE. ELEVATION TAKEN
 AS 15.17 M.S.L.

NOTE: REVISED TO CHANGE ELEVATION DATUM TO M.S.L.



SITE

VICINITY MAP
 N.T.S



MONITOR WELL DATA TABLE

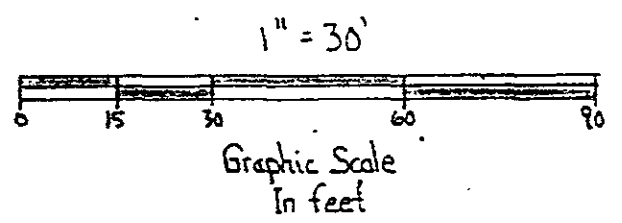
WELL DESIGNATION	ELEV	DESCRIPTION
MW1	15.58 16.03	TOP OF PVC CASING TOP OF BOX
MW2	15.62 16.81	TOP OF PVC CASING TOP OF BOX
MW3	15.94 16.42	TOP OF PVC CASING TOP OF BOX
B1	15.97	GROUND

* REVISED DECEMBER 9, 1992
 DECEMBER 8, 1992

JOB NO. 1982

PLAT SHOWING EXISTING MONITOR WELLS AT THE EZ LIQUOR STORE,
 LOCATED AT 901 LINCOLN AVENUE AT NINTH STREET, CITY OF
 ALAMEDA, ALAMEDA COUNTY, CALIFORNIA

FOR: ACC ENVIRONMENTAL CONSULTANTS, INC.
 PROJECT NO. 6039-2



RON ARCHER
 CIVIL ENGINEER, INC.
 CONSULTING · PLANNING · DESIGN · SURVEYING
 4133 Mehr Ave., Suite E
 Pleasanton, Ca. 94566
 Phone (510) 462-8372