American Can Company

P.O. Box 2092
3801 East 8th Street
Oakland, Cal. 94604

March 26, 1986

Mr. Ted Gerow
County of Alameda
Div. of Environmental Health
470 - 27 Street, Room 324
Oakland, CA 94612

SUBJECT: UNDERGROUND TANKS

Dear Mr. Gerow:

In preparation for and in accordance with the new regulations regarding underground tanks, our facility has engaged Aqua Terra Technologies to provide analysis and monitoring capability for our underground tanks. The first phase of their work, and of soil borings and monitoring well construction has been completed, and the result of their findings has now been reported to us.

The soil and water sample analysis indicates that there has been some low level leakage and/or surface spillage at certain of the tanks involved. A copy of the Aqual Terra report is enclosed for your review. You should be advised that we are planning closure of the oil tank in Area 2 and the resin tank in Area 3 in the very near future, and we will not be replacing these tanks. We have already pumped out the oil tank, and plan on removing the material in the resin tank very shortly. We are awaiting bids for the closure of the two tanks, and request whatever permits or letter of authorization we need from your department to proceed with the closure.

We will be pleased to discuss the report with you so that we can take the appropriate actions that may be necessary in regard to all of our underground tanks.

Very truly yours,

AMERICAN CAN COMPANY

D. P. BERGESON, Manager
Industrial Engineering

asm
encls.

cc: Mr. R. W. Schneiter
Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

Mr. Lester Feldman w/encls.
Regional Water Quality Control Board
San Francisco Bay Region
1111 Jackson St. - Room 6040
Oakland, CA 94607

March 20, 1986

AQUA TERRA Technologies

Mr. D.P. Bergeson
Manager, Industrial Engineering
American Can Company
3801 East Eighth Street
Oakland, CA 94601

Subject: Underground Storage Tank Monitoring Program
Soil Borings & Monitoring Well Construction

Dear Mr. Bergeson:

This letter briefly describes soil boring and monitoring well construction, and presents and interprets soil and groundwater sample analytical results. The work was performed in accordance with our proposal of September 18, 1985 as modified November 6, 1985. The work was authorized by your Purchase Order 55000318P dated November 13, 1985.

BACKGROUND

A proposed underground tank monitoring plan was submitted on November 25, 1985, to the Alameda County Health Care Services Agency for their approval. The County responded by letter dated January 7, 1986, that the plan was "quite acceptable" and recommended that we implement the plan as outlined in our proposal.

Having received approval for the plan from the responsible agency, four wells were constructed during the week of January 27, 1986, in the immediate vicinity of the six tank group (tank farm - Area 1) and one boring was drilled at each site of two separately located tanks (oil tank - Area 2 and resin tank - Area 3). The wells were placed to provide long term groundwater monitoring capabilities in accordance with Alameda County Water District guidelines, and the borings were drilled to identify significant soil and groundwater contamination which may have resulted from a leak in a tank or in piping.

SOIL BORINGS & MONITORING WELL CONSTRUCTION

Four groundwater monitoring wells were constructed in the immediate vicinity of the tank farm at the locations shown on Plate 1 of Attachment 1. The two soil borings associated with the oil tank and the resin tank were drilled as near to the tanks as practical. Well placement and soil boring details are provided in the geotechnical report presented in Attachment 1.

The monitoring wells were constructed of two-inch diameter PVC casings and screens in accordance with Alameda County Water District guidelines. The wells were developed by pumping to clean and stabilize the the soils around the screens. Water removed from the wells during development was retained on-site in 55 gallon drums suitable for containment of hazardous waste. Soil cuttings were left on-site pending review of analytical data to determine suitable disposal action.

The well locations were referenced by taping distances from known landmarks. The relative elevations of the well casings were determined by a level survey.

A field engineer supervised drilling operations, prepared detailed logs of soils encountered, and obtained soil samples at approximately five foot intervals. Also, drilling augers, sampling tools, and well casing and screen were steam cleaned prior to each use.

After completing well development, one groundwater sample was collected from each of the four monitoring wells. Approximately 10 gallons of water was purged from each well using a teflon bailer immediately prior to collecting groundwater samples. A teflon bailer with a teflon/stainless steel bottom emptying device was used for sample collection. The purge water was placed in drums with the well development water. In addition to the wells, one grab groundwater sample was collected from each of the two soil borings.

SOIL & GROUNDWATER SAMPLE ANALYSES

Soil and groundwater samples were transported to a certified analytical laboratory for analysis. Chain of custody forms, as required by the California Department of Health Services (DHS) were used for all samples.

Soil and groundwater samples were analyzed as summarized below:

- Soil samples collected from the four borings for the monitoring wells (MW1 through MW4) were composited into one sample for each depth sampled. With one exception, the borings were sampled at approximately three, six, 11, 16, 21, 26, and 31 feet below grade. A soil sample was not collected at the three foot depth from the boring for MW1. Therefore, a total

of 27 soil samples were collected and composited into seven soil samples for analysis. Sample compositing was performed by the analytical laboratory. The composited soil samples were analyzed by gas chromatography (GC) for purgeable aromatic hydrocarbons according to EPA Method 8020 protocol.

- Soil samples collected at approximately six and 11 feet below grade from the boring at the resin tank were composited into one sample for analysis. The composited soil sample was analyzed by GC for purgeable aromatics according to EPA Method 8020 protocol.

- Soil samples collected at approximately six, 11, and 16 feet below grade from the boring at the oil tank were composited into one sample for analysis. The composited soil sample was analyzed by GC for total hydrocarbons.

- Groundwater samples collected from well MW3 and from the boring at the resin tank were analyzed by gas chromatography/mass spectrometry (GC/MS) for purgeable organic chemicals according to EPA Method 624 protocol.

- The grab groundwater sample collected from the boring at the oil tank was analyzed by GC for total hydrocarbons and benzene, toluene, and xylene.

- Groundwater samples collected from monitoring wells MW1, MW2, and MW4 were analyzed for purgeable aromatic hydrocarbons according to EPA Method 602 protocol.

RESULTS & DISCUSSION

The results and discussion of the results are presented separately for the oil tank, the resin tank, and the tank farm. The laboratory data sheets for all samples analyzed are presented in Attachment 2.

Oil Tank - Area 2

The California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) has prepared guidelines for addressing leaks from underground tanks used for storage of fuels. The RWQCB guidelines establish 1000 mg/kg (ppm) hydrocarbons in soil and 1/4-inch floating product at the water table as decision criteria for further investigation and/or remedial action.

During sampling of the groundwater from the bore hole, no evidence of floating product was observed. The analytical data for the groundwater sample revealed less than 1.0 ug/L (ppb) of benzene and toluene, 4.0 ppb xylene, and 7,500 ppb total hydrocarbons. The composited soil sample contained 360 ppm total hydrocarbons. The data suggest that some material has been released to the environment from the tank or associated piping, or from transferring product into or out of the tank; however, the data are not indicative of substantial soil or groundwater contamination.

The purpose of drilling the boring was to establish conditions for excavating the tank and piping. The data indicate that excavation can proceed without further investigation. However, since the data indicate that some soil has been contaminated, excavation of contaminated soil in the vicinity of the tank should be included in the specification.

It is recommended that the tank be emptied immediately in order to eliminate the potential for further release of product to the soil. Excavation of the tank and piping can proceed following selection of an excavation contractor.

Resin Tank - Area 3 (now Area 4)

The composited soil sample collected from the boring near the resin tank contained no detectable levels of aromatic hydrocarbons (EPA Method 8020). However, the grab groundwater sample was found to contain the following compounds at detectable levels:

Chemical	Concentration (ppb)
methylene chloride (MeCl)	1.66
trans-1,2-dichloroethene (trans-DCE)	2.62
trichloroethene (TCE)	19.99
tetrachloroethene (PCE)	22.07
ethyl benzene	3.90

The analytical method used for the soil samples included, of the above compounds, only ethyl benzene.

The compounds detected in the groundwater sample, with the possible exception of ethyl benzene, are not associated with compounds historically stored in the underground tank.

The presence of the chlorinated compounds in the absence of compounds which were stored in the tank, suggests a source other than the underground tank. When considering the soil and groundwater data together, it appears that significant quantities of material have not been released from the resin tank. Therefore, excavation of the tank can proceed without concern for significant soil contamination.

Tank Farm - Area 1

Chemicals detected in the composited soil samples collected from the monitoring well borings and the relative location of influencing physical features are shown in Attachment 3. The figure presented in Attachment 3 shows the tank invert to exist at approximately 13 feet below grade, this is about three feet below the water table and the top of a relatively permeable and continuous aquifer in the area. The subsurface characteristics of the site are described in detail in Attachment 1.

The soil sample data as illustrated in Attachment 3 suggest that product responsible for the contamination originated with surface sources such as leaking pipes and transfers into and out of the tanks. Chemicals detected (benzene, ethyl benzene, toluene, xylene) in the soil samples attenuate rapidly from a summed concentration of 101 ppb at 2.5 feet to 35 ppb at six feet. Near the water table, an increased concentration of 62 ppb was observed. Below the water table, within the permeable formation, the soil samples were essentially free of detectable contamination.

The groundwater samples collected from the developed monitoring wells were found to contain the following concentrations of chemicals:

Chemical	Concentration (ppb)			
	MW1	MW2	MW3	MW4
benzene	<0.1	<1	4.99	1
toluene	<0.1	300	288	120
ethyl benzene	<0.1	1,800	1,109	1,200
xylene	<0.1	2,700	--	2,200
dichloroethene	--	--	9.08	--

Although not encountered in the soil borings drilled to

place the wells, permeable backfill material likely exists around the tanks and extends to the ground surface. Release of product to these soils would provide a less restricted path to groundwater. Migration of released product through the backfill may be the source of contamination detected in the groundwater samples collected.

The water table exists about six inches above the top of the permeable formation; however, chemicals have apparently not migrated in the direction of MW1 since the water sampled from this well was free of the chemicals detected in the other wells. One possible explanation for the apparent confinement of the contamination is the position of the water table relative to the confining layer. Contamination may exist as "floating" product at the water table, thereby experiencing limited dispersion through the overlying clayey soils. Nevertheless, the lack of detectable chemicals in MW1 remains an unanswered question.

The need for further evaluation of the tank farm area may be required by regulatory agencies. However, regardless of regulatory requirements, serious consideration should be given to upgrading or replacing the tank farm facilities.

The specifications for excavation of the oil and resin tanks have been distributed to contractors for bidding. Excavation contractor bids received will be transmitted to you for review and selection shortly. If you have any questions regarding the contents of this letter, please do not hesitate to contact me.

Sincerely,

Aqua Terra Technologies, Inc.

R. Wane Schneiter, Ph.D., P.E.
Project Manager

RWS:lg
Attachments(3)

ATTACHMENT 1

GEOTECHNICAL ENGINEERING
SERVICES
SITE ASSESSMENT
AMERICAN CAN COMPANY
3801 E. 8th AVENUE
OAKLAND, CALIFORNIA
SCI 157.018

Prepared for:

Aqua Terra Technologies
3490 Buskirk Avenue, Suite A
Pleasant Hill, California 94523

By:

R. William Rudolph
Civil Engineer 32136

James P. Bowers
Civil Engineer 28962

Subsurface Consultants, Inc.
171 12th Street, Suite 201
Oakland, California 94607
(415) 268-0461

February 28, 1986

I INTRODUCTION

This report presents the results of geotechnical engineering services provided in conjunction with Aqua Terra Technologies' assessment of the American Can facility in Oakland, California. The facility is located at 3801 East 8th Avenue. The location of the study area in relation to adjacent streets is shown on the Site Plan, Plate 1.

II FIELD INVESTIGATION

The investigation consisted of drilling 6 test borings at the approximate locations shown on Plate 1. Four of the borings were drilled near several underground tanks. The tanks are located near the southwest side of the facility adjacent to Alameda Avenue. The other two borings were drilled on the northeast side of the facility near other underground storage tanks. The test borings ranged in depth from about 15 to 31.5 feet. Due to limited access, Test Boring 1 was drilled with a portable "Minuteman" drill rig equipped with 3-inch-diameter flight augers. The other borings were drilled using 8-inch-diameter, hollow stem auger drilling equipment.

Soil Sampling

Our field engineer observed drilling operations, prepared detailed logs of the borings and obtained samples of the materials encountered. The logs of the borings are presented on Plates 2

through 7. Soil samples were obtained in 2.5-inch-diameter brass liners using a Modified California Drive sampler having an outside diameter of 3.0 inches and an inside diameter of 2.5 inches. The sampler was driven with a 70 pound hammer having an 18 inch fall in Test Boring 1. In all the other borings, a 140 pound hammer having a 30 inch fall was used. The blows required to drive the sampler the final 12 inches of an 18-inch drive were recorded and are presented on the boring logs. Teflon sheeting was placed between the liner caps and the soil samples; the caps were then sealed with plastic tape and marked for identification. The soil samples were refrigerated on-site in ice chests and given to a representative of Aqua Terra Technologies, along with appropriate Chain of Custody forms.

The soil sampler, soil sample tubes, drill rods and augers used for drilling were steam cleaned prior to their initial use. The samplers and drilling equipment were steam cleaned again between each subsequent use to reduce the likelihood of cross contamination between the samples and/or borings.

Test Borings 1 and 2 were backfilled with a cement/bentonite grout upon completion of drilling. The grout was placed using tremmie methods.

Monitoring Well Construction

Borings MW1 through MW4 were completed as groundwater monitoring wells in accordance with Alameda County Groundwater Monitoring Guidelines, dated May 1984. A well permit, Number 86023, was obtained and filed for the completed wells. Well details are

schematically shown on the boring logs.

The wells consist of 2-inch-diameter, schedule 40 PVC pipe extending between 30 and 31.5 feet below the groundsurface. The lower 25 feet of the wells consist of machine slotted well screen having 0.020 inch wide slots. The slotted section of each well extends about 5 feet above the groundwater level and about 15 feet below. The upper portion of the wells consist of unslotted pipe. Pipe sections were joined by a threaded flush joint; no PVC glue was used. The annular space around the screened section was backfilled with No. 3 washed sand. A bentonite seal, about 12 inches thick, was placed above the sand. The annulus above the seal was backfilled with a thick cement/bentonite grout. The wells were completed about 8 inches above grade. The well heads are protected by locking steel well covers.

The wells were developed using a dual hose airlift pump system. The equipment used to develop the wells was steam cleaned prior to its use in each well. Approximately 55 gallons of water were removed during development of each well.

Contaminated Material Control

Soil cuttings from the borings were placed in an open area near the borings and covered with plastic. The water generated by well development was retained in 55 gallon, Department of Transportation approved steel drums.

III SITE CONDITIONS

Surface Conditions

The American Can Company facility is located in an industrial area of Oakland, California. The site is relatively level and is occupied by several warehouses and office buildings. We understand that several can manufacturing processes are conducted at the facility.

Subsurface Conditions

Our test borings indicate that the areas investigated are underlain at the surface by 4 to 9 feet of black clayey soil. This layer consists of medium stiff silty clays which have a high plasticity and contain minor amounts of sand and gravel. Below the surface clay layer are interbedded layers of clayey sand and gravel, and relatively clean sand and gravel. This deposit appears to be a relatively continuous aquifer in the area. In general, it varies in thickness from about 8 to 16 feet. The extent of this permeable deposit is summarized for each test boring in the following table:

Test Boring	Depth Below Groundsurface to Top of Deposit (feet)	Depth Below Groundsurface to Bottom of Deposit (feet)
1	5	20
2	5	*
MW1	10	26
MW2	10	20
MW3	10	22
MW4	10	18

* Boring 2 did not extend through the permeable layer.

The aquifer is confined by an underlying clay layer. This layer is medium stiff and extended to the maximum depths drilled, approximately 32 feet.

Groundwater was encountered in all test borings. Test Boring 1 was left open for approximately 24 hours before the groundwater level was measured. Test Boring 2 was backfilled before a stabilized groundwater reading could be obtained. Groundwater readings within the wells were made 3 to 4 days after well installation. A summary of groundwater depths is presented below:

Test Boring	Depth to Groundwater Below Groundsurface (feet)	Date Measured
1	13.0	1/30/86
2	13.0	1/31/86
MW1	9.4	2/3/86
MW2	9.5	2/3/86
MW3	9.6	2/3/86
MW4	9.6	2/3/86

Due to the close proximity of the wells to one another, we are unable to accurately evaluate groundwater flow directions and gradients. However, based upon our judgement and published geologic information for the area, we believe that the regional groundwater flow direction is toward the Oakland Estuary, i.e. toward the southwest.

List of Attached Plates

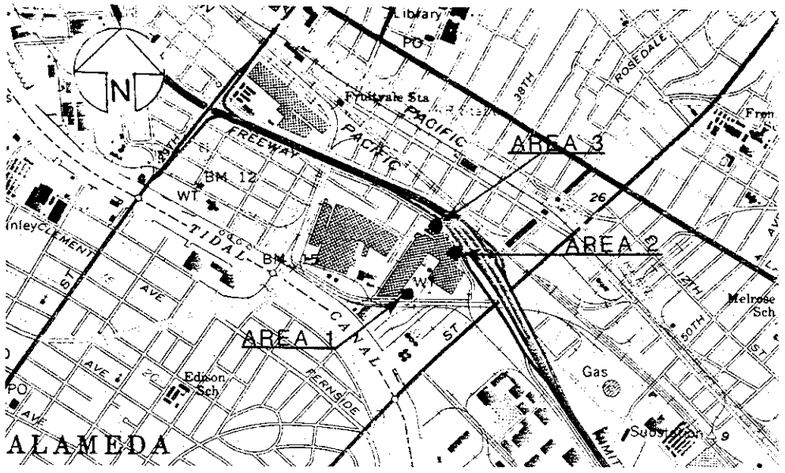
Plate 1	Site Plan
Plates 2 and 3	Logs of Test Borings 1 and 2
Plates 4 through 7	Logs of Test Borings MW1 through MW4

Distribution

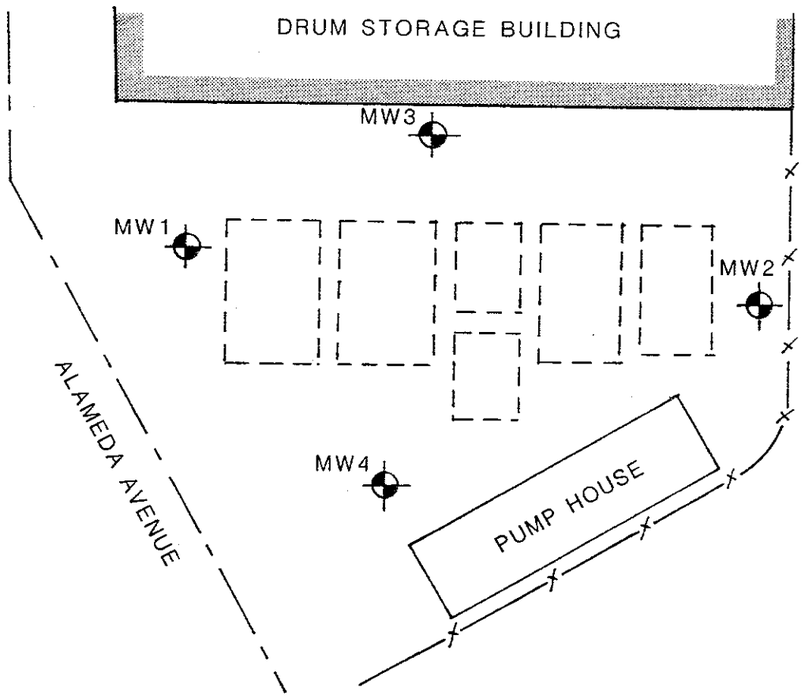
6 copies: Dr. R. Wane Schneiter
Aqua Terra Technologies
3490 Buskirk Avenue, Suite A
Pleasant Hill, California 94523

JNA:RWR:JPB:lmc

VICINITY MAP



AREA 1

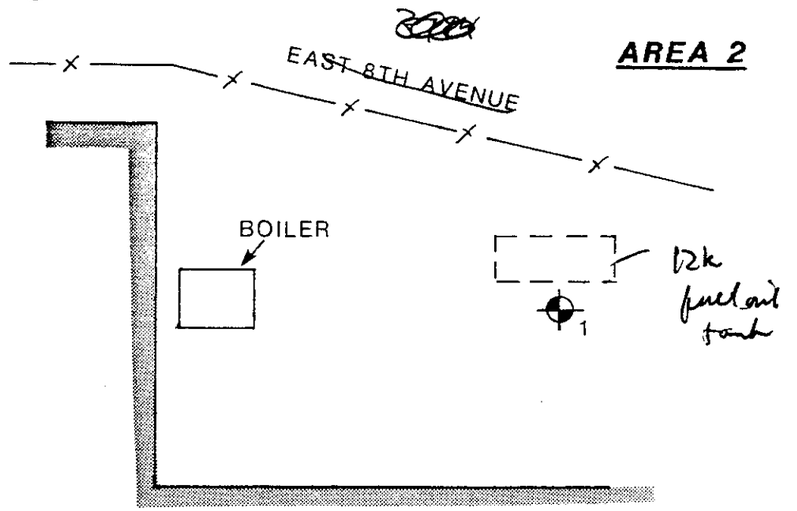


LEGEND

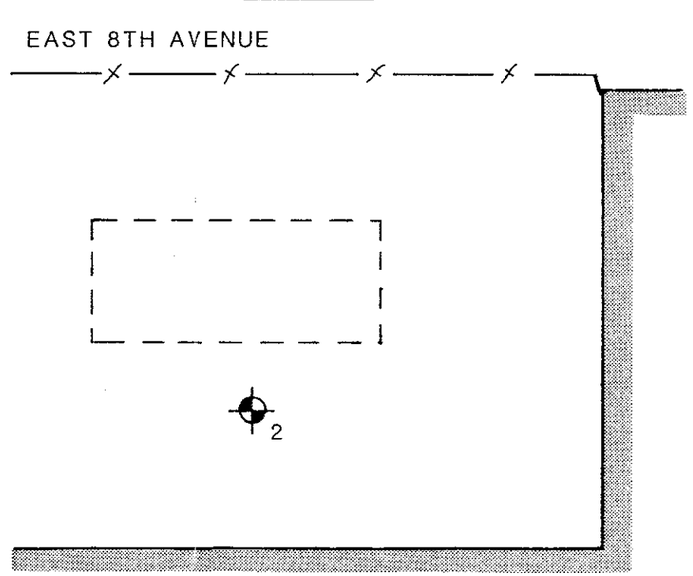
- MW2 — MONITORING WELL
- 1 — TEST BORING
- UNDERGROUND STORAGE TANK
- EXISTING BUILDING

PLANS NOT TO SCALE

AREA 2



AREA 3



SITE PLAN

Subsurface Consultants

AMERICAN CAN CO. - OAKLAND, CA.

JOB NUMBER	DATE	APPROVED	PLATE
157.018	2/26/86		1

LOG OF TEST BORING 1

EQUIPMENT 3" FLIGHT AUGER

DATE DRILLED 1/29/86

ELEVATION

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
			0			ASPHALTIC CONCRETE
						BLACK SILTY CLAY (CH) medium stiff, moist, slight petroleum odor
			5		14	BROWN CLAYEY SAND (SC) medium dense, moist, slight petroleum odor
						contains minor amounts of gravel
			10		30	BROWN CLAYEY GRAVEL (GC) dense, saturated
						GROUNDWATER LEVEL (1/30/86)
			15		35	
			20			BROWN SANDY CLAY (CL) stiff, saturated
			25		40	
			30			
			35			
			40			

SAMPLER O.D. : 3.0 inches
SAMPLER I.D. : 2.5 inches
HAMMER WEIGHT : 70 pounds
HAMMER DROP : 18 inches

Subsurface Consultants

AMERICAN CAN CO. - OAKLAND, CA.

JOB NUMBER	DATE	APPROVED
157.018	2/26/86	

PLATE 2

LOG OF TEST BORING 2

EQUIPMENT 8" HOLLOW STEM AUGER
DATE DRILLED 1/31/86
ELEVATION

LABORATORY TESTS	MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
			0			ASPHALTIC CONCRETE / BASEROCK
						BLACK SILTY CLAY (CH) medium stiff, moist
			5		46	BROWN CLAYEY SAND (SC) dense, moist
			10		42	BROWN CLAYEY GRAVEL (GC) dense, saturated
						GROUNDWATER LEVEL AFTER DRILLING
			15			BORING WAS BACKFILLED BEFORE A STABILIZED GROUNDWATER LEVEL WAS RECORDED
			20			
			25			
			30			
			35			
			40			

HAMMER WEIGHT : 140 pounds
HAMMER DROP : 30 inches

Subsurface Consultants

AMERICAN CAN CO. - OAKLAND, CA.

JOB NUMBER	DATE	APPROVED
157.018	2/26/86	

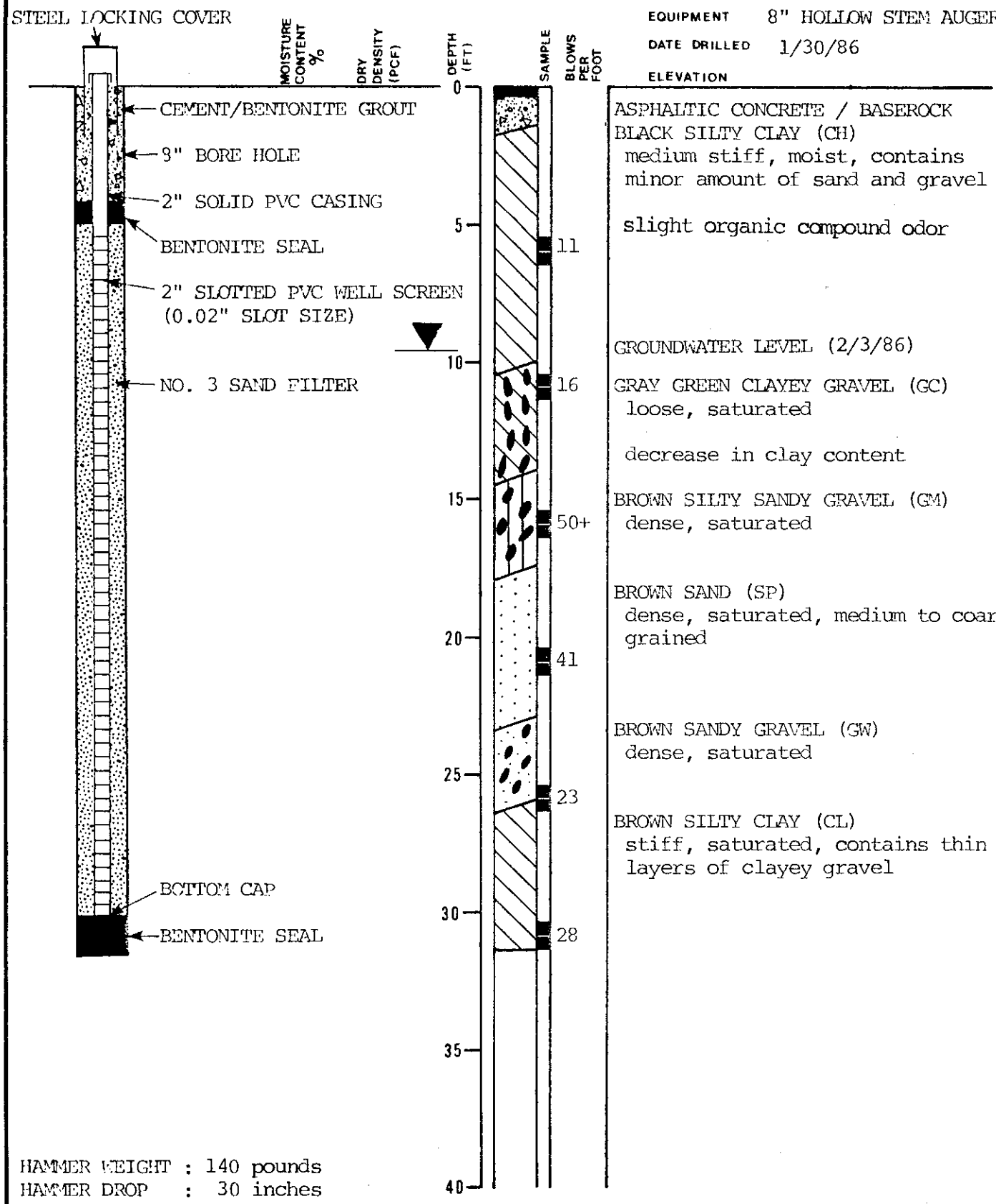
PLATE 3

LOG OF TEST BORING MW 1

EQUIPMENT 8" HOLLOW STEM AUGER

DATE DRILLED 1/30/86

ELEVATION



HAMMER WEIGHT : 140 pounds
HAMMER DROP : 30 inches

Subsurface Consultants

AMERICAN CAN CO. - OAKLAND, CA.

JOB NUMBER	DATE	APPROVED
157.018	2/26/86	

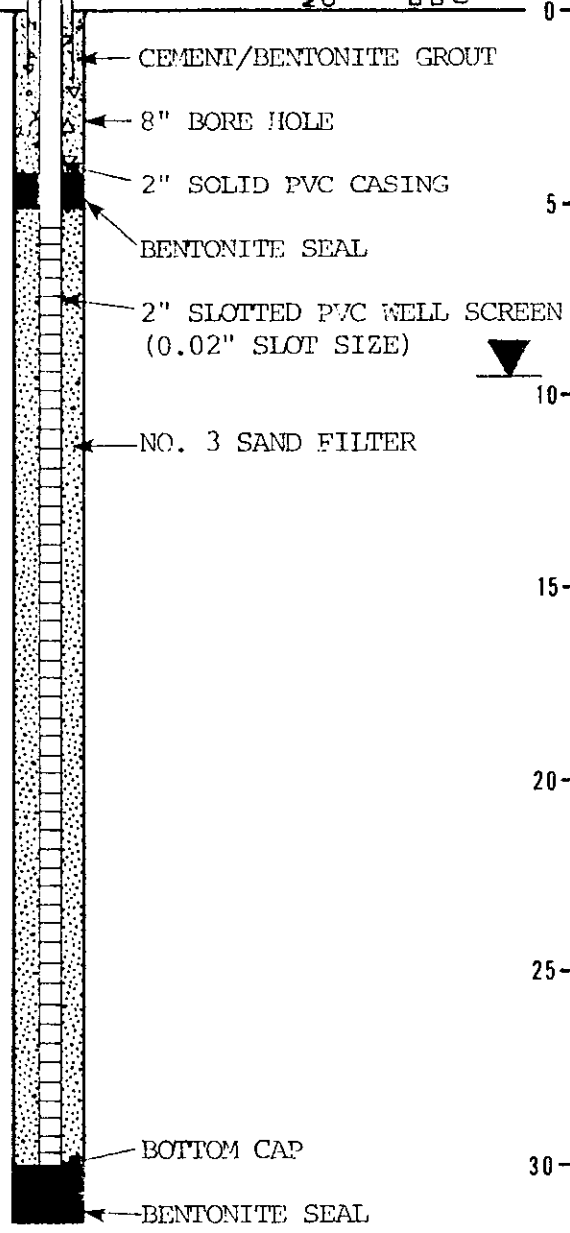
PLATE 4

LOG OF TEST BORING MW 2

EQUIPMENT 8" HOLLOW STEM AUGER

DATE DRILLED 1/30/86

ELEVATION



MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
		0			ASPHALTIC CONCRETE / BASEROCK
				20	BLACK SILTY CLAY (CH) stiff, wet, contains minor amount of sand and gravel, strong organic compound odor
		5		42	BROWN SILTY SANDY CLAY (CL) stiff, moist, with some gravel slight organic compound odor
					GROUNDWATER LEVEL (2/3/86)
		10		56	BROWN CLAYEY GRAVEL (GC) dense, saturated
		15		29	
		20		17	BROWN SILTY CLAY (CL) medium stiff, saturated, contains minor amount of sand, contains thin gravel layers
		25		24	color change to light gray
		30		31	
		35			
		40			

HAMMER WEIGHT : 140 pounds
HAMMER DROP : 30 inches

Subsurface Consultants

AMERICAN CAN CO. - OAKLAND, CA.

JOB NUMBER	DATE	APPROVED
157.018	2/26/86	

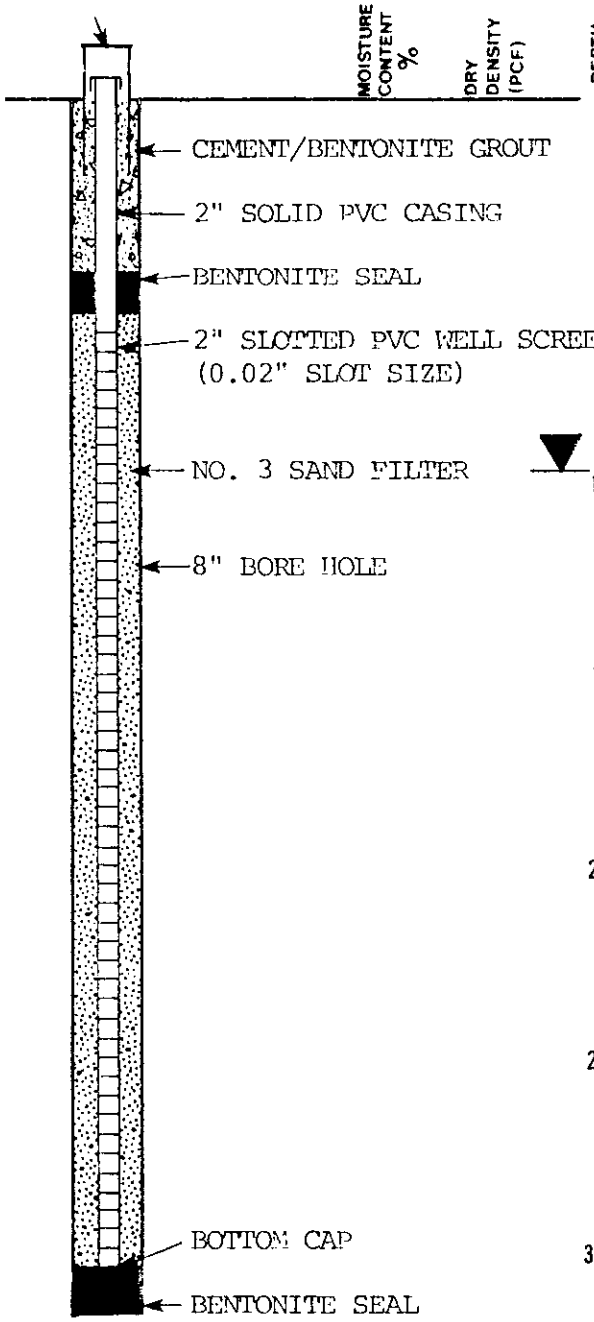
PLATE 5

LOG OF TEST BORING MW 3

EQUIPMENT 8" HOLLOW STEM AUGER

DATE DRILLED 1/31/86

ELEVATION



MOISTURE CONTENT %	DRY DENSITY (PCF)	DEPTH (FT)	SAMPLE	BLOWS PER FOOT	
		0			ASPHALTIC CONRETE / BASEROCK
				20	BLACK SILTY CLAY (CL) medium stiff, moist
		5		39	GRAY SANDY CLAY (CL) medium stiff, moist
		10		36	GROUNDWATER LEVEL (2/3/86) GRAY CLAYEY SAND (SC) medium dense, saturated
		15		43	GRAY SAND (SW) dense, saturated, medium to coarse grained
					color change to brown
		20		43	BROWN SANDY CLAY (CL) stiff, saturated
		25		65	GRAY SILTY CLAY (CL) very stiff, saturated
					color change to mottled brown
		30		42	
		35			
		40			

HAMMER WEIGHT : 140 pounds
HAMMER DROP : 30 inches

Subsurface Consultants

AMERICAN CAN CO. - OAKLAND, CA.

JOB NUMBER	DATE	APPROVED
157.018	2/26/86	

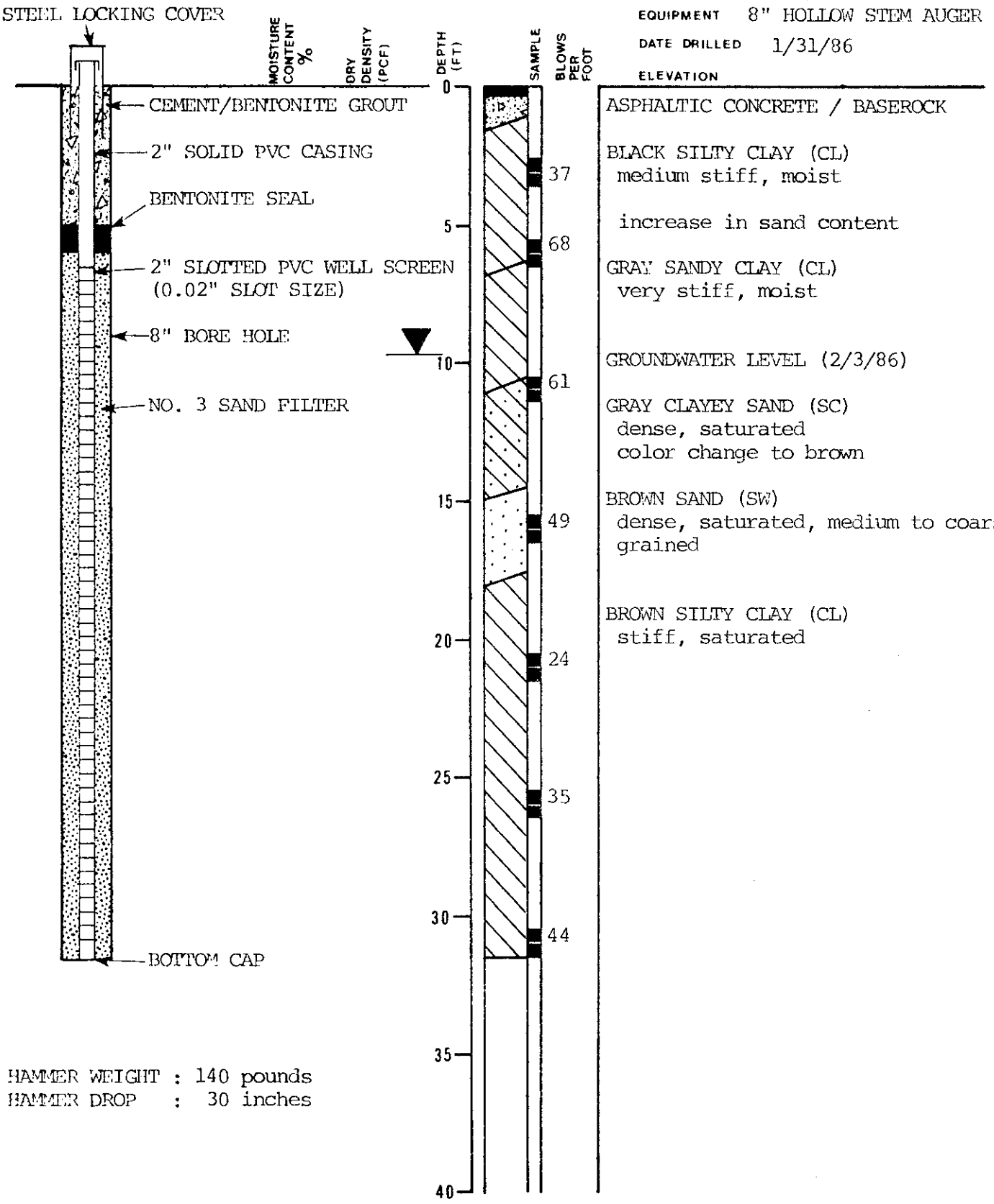
PLATE 6

LOG OF TEST BORING MW 4

EQUIPMENT 8" HOLLOW STEM AUGER

DATE DRILLED 1/31/86

ELEVATION



HAMMER WEIGHT : 140 pounds
HAMMER DROP : 30 inches

Subsurface Consultants	AMERICAN CAN CO. - OAKLAND, CA.			PLATE
	JOB NUMBER	DATE	APPROVED	7
	157.018	2/26/86		

ATTACHMENT 2

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-19-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1219

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Water

Client's ID: AQT.537, B1

Total Hydrocarbons (light, group A)	7500	ug/L
Benzene	<1	ug/L
Toluene	<1	ug/L
Xylene	4	ug/L

Note: The total light-weight hydrocarbon scan was calibrated using regular gasoline as a standard. The benzene, toluene and were calibrated using standards of each component. The detection method used is the flame ionization technique.

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-19-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1218

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. 1-6, 1-11, 1-16

Total Hydrocarbons (heavy-weight, group A)	860	mg/kg

Note: The above value is based on calibration with diesel as a standard. The detector used is a flame ionization detector.

Cheryl A. Smith
Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-19-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

Laboratory number: 6-1217

Date collected: Not given
Date in lab: 2-5-86
Sample type: Water

Client identification: AQT.537, B2

EPA Method 624 Organohalides

Chloromethane	<0.08 ug/L
Bromomethane	<1.18 ug/L
Vinyl Chloride	<0.18 ug/L
Chloroethane	<0.52 ug/L
Methylene Chloride	1.66 ug/L
Trichlorofluoromethane	<0.25 ug/L
1,1-Dichloroethene	<0.13 ug/L
1,1-Dichloroethane	<0.07 ug/L
trans-1,2-dichloroethene	2.62 ug/L
Chloroform	<0.05 ug/L
1,2-Dichloroethane	<0.03 ug/L
1,1,1-trichloroethane	<0.03 ug/L
Carbon Tetrachloride	<0.12 ug/L
Bromodichloromethane	<0.10 ug/L
1,2-Dichloropropane	<0.04 ug/L
trans-1,3-Dichloropropene	<0.34 ug/L
Trichloroethene	19.99 ug/L
Dibromochloromethane	<0.09 ug/L
1,1,2-Trichloroethane	<0.02 ug/L
cis-1,3-dichloropropene	<0.20 ug/L
2-Chloroethylvinyl ether	<0.13 ug/L
Bromoform	<0.20 ug/L
1,1,2,2-Tetrachloroethane	<0.03 ug/L
Tetrachloroethene	22.07 ug/L
Chlorobenzene	<0.25 ug/L
1,3-Dichlorobenzene	<0.32 ug/L
1,2-Dichlorobenzene	<0.15 ug/L
1,4-Dichlorobenzene	<0.24 ug/L
Benzene	<0.20 ug/L
Toluene	<0.20 ug/L
Ethyl Benzene	3.90 ug/L

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1215

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. 2-6, 2-11

EPA Method 8020 Aromatic Hydrocarbons

Benzene	<1	ug/kg
Toluene	<1	ug/kg
Ethyl Benzene	<1	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	<1	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1208

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW4-3,MW3-2.5,MW2-2.5

EPA Method 8020 Aromatic Hydrocarbons

Benzene	5	ug/kg
Toluene	27	ug/kg
Ethyl Benzene	18	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	51	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1209

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW1-6,MW2-6,MW3-6,MW4-6

EPA Method 8020 Aromatic Hydrocarbons

Benzene	1	ug/kg
Toluene	<1	ug/kg
Ethyl Benzene	5	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	29	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1210

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW1-11,MW2-11,MW3-11,MW4-11

EPA Method 8020 Aromatic Hydrocarbons

Benzene	14	ug/kg
Toluene	24	ug/kg
Ethyl Benzene	7	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	17	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1211

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW1-16,MW2-16,MW3-16,MW4-16

EPA Method 8020 Aromatic Hydrocarbons

Benzene	<1	ug/kg
Toluene	<1	ug/kg
Ethyl Benzene	<1	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	<1	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1212

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW1-21,MW2-21,MW3-21,MW4-21

EPA Method 8020 Aromatic Hydrocarbons

Benzene	<1	ug/kg
Toluene	<1	ug/kg
Ethyl Benzene	<1	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	<1	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1213

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW1-26,MW2-26,MW3-26,MW4-26

EPA Method 8020 Aromatic Hydrocarbons

Benzene	<1	ug/kg
Toluene	<1	ug/kg
Ethyl Benzene	<1	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	<1	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

RECEIVED FEB 18 1986

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1214

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Soil

Client's ID: AQT.537, Comp. MW1-31,MW2-31,MW3-31,MW4-31

EPA Method 8020 Aromatic Hydrocarbons

Benzene	<1	ug/kg
Toluene	6	ug/kg
Ethyl Benzene	<1	ug/kg
Chlorobenzene	<1	ug/kg
1,4 and 1,3-Dichlorobenzene	<1	ug/kg
1,2-Dichlorobenzene	<1	ug/kg
Xylene	<1	ug/kg

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-14-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1220

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Water

Client's ID: AQT.537, MW1

EPA Method 602 Aromatic Hydrocarbons

Benzene	<0.1	ug/L
Toluene	<0.1	ug/L
Ethyl Benzene	<0.1	ug/L
Chlorobenzene	<0.1	ug/L
1,4 and 1,3-Dichlorobenzene	<0.1	ug/L
1,2-Dichlorobenzene	<0.1	ug/L
Xylene	<0.1	ug/L

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1221

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Water

Client's ID: AQT.537, MW2

EPA Method 602 Aromatic Hydrocarbons

Benzene	<1	ug/L
Toluene	300	ug/L
Ethyl Benzene	1800	ug/L
Chlorobenzene	<1	ug/L
1,4 and 1,3-Dichlorobenzene	<1	ug/L
1,2-Dichlorobenzene	<1	ug/L
Xylene	2700	ug/L

Note: The detection limit for this sample is ten times the usual detection limit due to the high concentrations of other components present.

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-19-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

Laboratory number: 6-1216

Date collected: Not given
Date in lab: 2-5-86
Sample type: Water

Client identification: AQT.537, MW3

EPA Method 624 Organohalides

Chloromethane	<0.08 ug/L
Bromomethane	<1.18 ug/L
Vinyl Chloride	<0.18 ug/L
Chloroethane	<0.52 ug/L
Methylene Chloride	<0.25 ug/L
Trichlorofluoromethane	<0.25 ug/L
1,1-Dichloroethene	9.08 ug/L
1,1-Dichloroethane	<0.07 ug/L
trans-1,2-dichloroethene	<0.10 ug/L
Chloroform	<0.05 ug/L
1,2-Dichloroethane	<0.03 ug/L
1,1,1-trichloroethane	<0.03 ug/L
Carbon Tetrachloride	<0.12 ug/L
Bromodichloromethane	<0.10 ug/L
1,2-Dichloropropane	<0.04 ug/L
trans-1,3-Dichloropropene	<0.34 ug/L
Trichloroethene	<0.12 ug/L
Dibromochloromethane	<0.09 ug/L
1,1,2-Trichloroethane	<0.02 ug/L
cis-1,3-dichloropropene	<0.20 ug/L
2-Chloroethylvinyl ether	<0.13 ug/L
Bromoform	<0.20 ug/L
1,1,2,2-Tetrachloroethane	<0.03 ug/L
Tetrachloroethene	<0.03 ug/L
Chlorobenzene	<0.25 ug/L
1,3-Dichlorobenzene	<0.32 ug/L
1,2-Dichlorobenzene	<0.15 ug/L
1,4-Dichlorobenzene	<0.24 ug/L
Benzene	4.99 ug/L
Toluene	288 ug/L
Ethyl Benzene	1,109 ug/L

Analytical Director

Multi-Tech
Laboratories, Inc.
320 TESCONI CIRCLE, SUITE R • SANTA ROSA, CA 95401 • (707) 544-5570

2-13-86

Aqua Terra Technologies
3490 Buskirk Ave., Suite A
Pleasant Hill, CA 94523

SAMPLE NUMBER: 6-1222

Date collected: Not given
Date in lab: 2-5-86
Collected by: Client
Sample type: Water

Client's ID: AQT.537, MW4

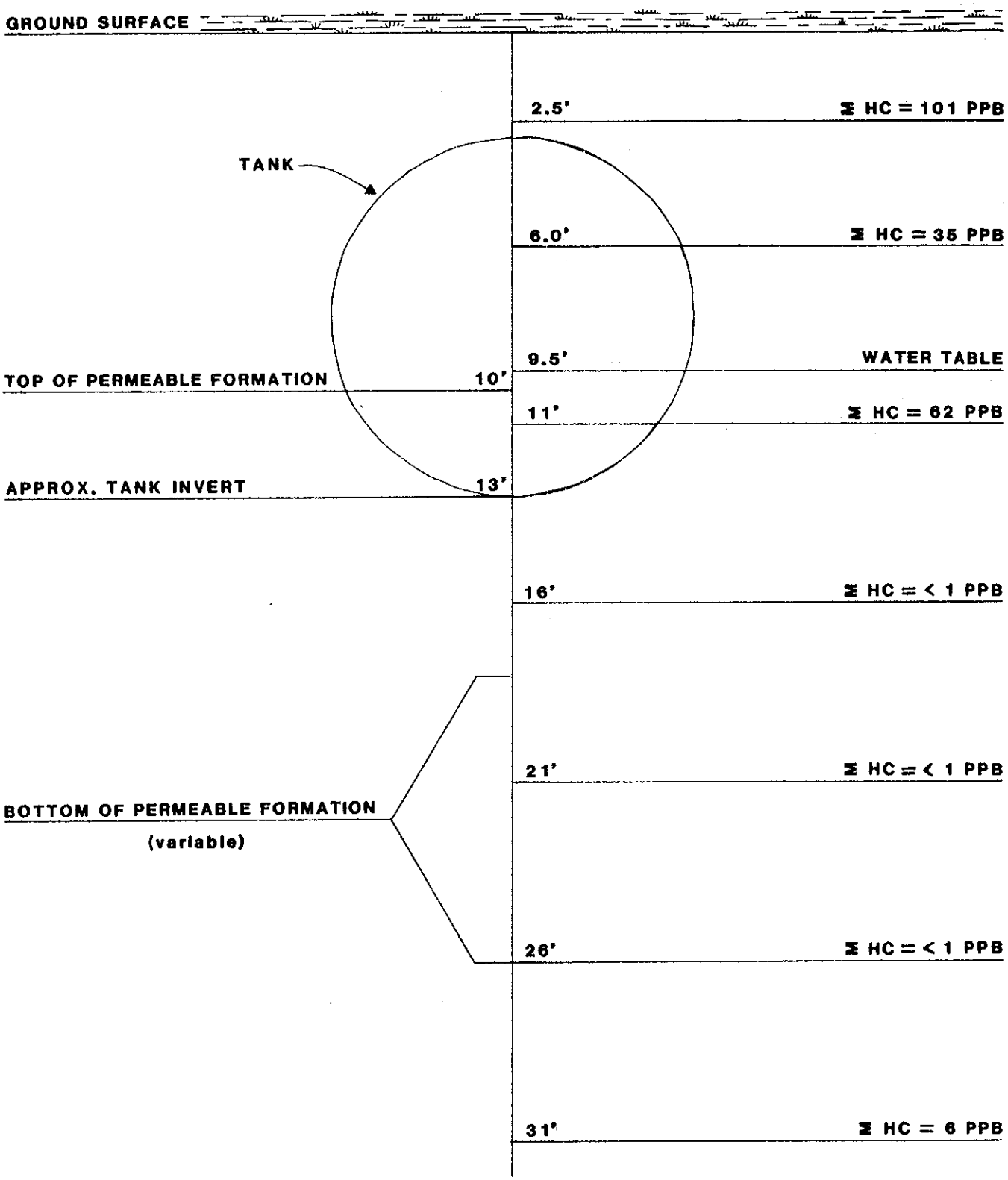
EPA Method 602 Aromatic Hydrocarbons

Benzene	1	ug/L
Toluene	120	ug/L
Ethyl Benzene	1200	ug/L
Chlorobenzene	<1	ug/L
1,4 and 1,3-Dichlorobenzene	<1	ug/L
1,2-Dichlorobenzene	<1	ug/L
Xylene	2200	ug/L

Note: The detection limit for this sample is ten times the usual detection limit due to the high concentration of other components present.

Analytical Director

ATTACHMENT 3



SOIL SAMPLE DATA PROFILE

AQUA TERRA TECHNOLOGIES
Environmental Consultants

American Can Company

JOB NUMBER	DATE	APPROVED	PLATE
537	3/5/86		3