

HELLER, EHRMAN, WHITE & McAULIFFE

ATTORNEYS

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

91 JUL 24 PM 12:04

525 UNIVERSITY AVENUE
PALO ALTO, CALIFORNIA 94301-1908
FACSIMILE (415) 324-0638
TELEPHONE (415) 326-7600

333 BUSH STREET · SAN FRANCISCO, CALIFORNIA 94104-2878
CABLE HELPOW · TELEX 184-996 · FACSIMILE (415) 772-6268
TELEPHONE (415) 772-6000

701 FIFTH AVENUE
SEATTLE, WASHINGTON 98104-7098
FACSIMILE (206) 447-0849
TELEPHONE (206) 447-0900

601 SOUTH FIGUEROA STREET
LOS ANGELES, CALIFORNIA 90017-8788
FACSIMILE (213) 614-1868
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1201 PACIFIC AVENUE
TACOMA, WASHINGTON 98402-4308
FACSIMILE (206) 572-6743
TELEPHONE (206) 572-6666

July 23, 1991

1300 S.W. FIFTH AVENUE
PORTLAND, OREGON 97201-5696
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TELEPHONE (503) 227-7400

550 WEST 7TH AVENUE
ANCHORAGE, ALASKA 99501-3571
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(415) 772-6611

16341-0001

WRITER'S DIRECT DIAL NUMBER

Larry Seto
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621

450-500 San Pablo Avenue, Albany, CA

Dear Mr. Seto:

As you may have heard, Jon Benjamin has taken his family back to the East Coast and is no longer working with this firm. I am now the attorney representing Albany Bowl Properties in the above.

Enclosed you will find two copies of the Third Quarter Groundwater Monitoring Report prepared by Aqua Terra Technologies. You will note that no TPH as gasoline, BTEX or lead was found in monitoring well MW-1, located adjacent to and downgradient from the former underground storage tank removed from the Albany Bowl property. However, groundwater samples from monitoring well MW-3, located adjacent to the Plaza Car Wash property (400 San Pablo Avenue), continue to show petroleum hydrocarbon contamination. Aqua Terra sampled this well at the request of Albany Bowl Properties, because Albany Bowl had not received any information from Plaza Car Wash as to whether contaminants were continuing to migrate to the Albany Bowl property after Plaza Car Wash removed its USTs. (As you know, Albany Bowl has agreed to keep in place monitoring wells MW-2 and MW-3, which serve as upgradient monitoring wells for the Plaza Car Wash investigation and remediation, based on the understanding that only the Plaza Car Wash operators would be responsible for monitoring these wells.) As the report

Larry Seto
Alameda/Health Care Services
July 23, 1991

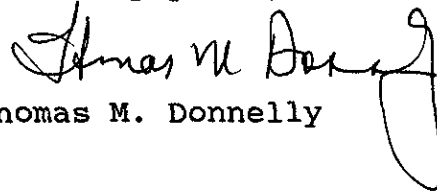
Page 2

indicates, contaminants from the Plaza Car Wash property indeed continue to migrate to the Albany Bowl property.

Aqua Terra concludes that, although most of the contaminated soil apparently was removed from the Plaza Car Wash property, some residual concentrations may still be present in the soil. Aqua Terra recommends, therefore, that some type of groundwater remediation (such as pumping and treating the groundwater) be undertaken on the Plaza Car Wash property to halt the continual migration of contaminants off-site.

Please call us so that we may discuss what course of action the County plans to take. I look forward to hearing from you soon.

Sincerely yours,



Thomas M. Donnelly

Enclosure

cc: Ken Friedman
William E. Motzer



July 12, 1991

91 JUL 24 PM 12:05

Mr. Ken Friedman
Albany Bowl Properties
540 San Pablo Avenue
Albany, CA 94706

**Subject: Third Quarter
Groundwater Sample Analysis for
Monitoring Well MW-1
450-500 San Pablo Avenue
Albany, CA
(Project No. 9064)**

Dear Mr. Friedman:

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
94596
415 934-4884
FAX 934-0418

The following data was obtained by Aqua Terra Technologies, Inc. (ATT) as part of the quarterly groundwater monitoring requirements for the property located at 500 San Pablo Avenue in Albany, California. These requirements are in accordance with ATT's October 17, 1990 Tank Closure and Monitoring Well Installation report and the October 26, 1990 letter from the Alameda County Health Care Services Agency (ACHCSA) concurring with ATT's conclusions and recommendations for this property.

Groundwater Level Measurements

Groundwater levels were measured from groundwater monitoring wells MW1, MW2, and MW3 (Table 1, Attachment A). The shallow, unconfined groundwater flow direction and gradient are based on groundwater levels measured during this quarter; they indicate that the shallow, unconfined groundwater flow direction is toward the west at a gradient of 0.005 feet per foot (ft/ft) (Plate 1, Attachment B). The current (4-18-91) flow direction and gradient are consistent with historical data indicating groundwater flow toward Cerrito Creek during periods of sparse to no precipitation. However, during periods of intense rainfall, overflow from Cerrito Creek causes groundwater recharge and groundwater flow reversal (ATT, 1990). Such an event probably occurred during March 1991, between ATT's quarterly monitoring, in which heavy rains occurred in the Bay Area.

Groundwater Sample Collection and Analyses

Groundwater samples were collected from groundwater monitoring wells MW1 (routine sampling) and MW3 (at the client's request for this quarter).

9064-#1/KF3RDQRT.RPT

Mr. Ken Friedman
Albany Bowl Properties
July 12, 1991
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Monitoring well MW3 sampling was not required by the ACHCSA because the hydrocarbon contamination in groundwater from this well has been attributed to the gasoline spill from the leaking underground storage tanks (USTs) on the adjacent Plaza Car Wash property at 400 San Pablo Avenue (Plate 1, Attachment B and ATT, 1990). Monitoring well MW3 is located at the 450 San Pablo Avenue property which, together with the 500 San Pablo Avenue property, is owned by Albany Bowl Properties.

Groundwater samples from groundwater monitoring wells MW1 and MW3 were collected on March 18, 1991 in accordance with San Francisco Bay Region - Regional Water Quality Control Board (RWQCB) and ACHCSA requirements [see Leaking Underground Fuel Tank (LUFT), October 1989 Manual]. Sample protocol and sample collection records are in Attachment C. Samples were submitted, under chain of custody documentation, to a California Department of Health Service (DHS) certified laboratory. Certified laboratory data sheets are in Attachment D.

Samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and tetraethyl (organic) lead using U.S. Environmental Protection Agency (EPA) methods 5030, 8020, and LUFT, respectively. Sample analyses and method detection limits are summarized on Table 2 (Attachment A).

For the groundwater sample collected from monitoring well MW1, TPH as gasoline, BTEX, and organic lead were all below method detection limits. Groundwater collected from monitoring well MW3 contained TPH as gasoline (at 0.270 mg/L) and BTEX (at 0.130 mg/L, 0.010 mg/L, 0.005 mg/L and 0.010 mg/L. Organic lead was reported below method detection limits.

Additional Investigations

Soil Tech Engineering Report

ATT personnel also reviewed, on June 5, 1991 at ACHCSA offices, an underground tank soil sampling and excavation report for the adjacent Plaza Car Wash property. This report, dated January 15, 1991, was prepared by Soil Tech Engineering, Inc. (STE) of Santa Clara, California (STE, 1991). The report summarizes USTs removal, gasoline contaminated soil excavation, and soil and groundwater sampling.

Mr. Ken Friedman
Albany Bowl Properties
July 12, 1991
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According to the STE report, on November 5 and 6, 1990, Alpha Geo Services removed three 10,000-gallon gasoline USTs from the Plaza Car Wash property. Shallow groundwater was encountered at approximately eight feet below grade. Soil excavation began on or about November 8, 1990 and continued through November 10, 1990. Approximately 4,700 gallons of gasoline contaminated groundwater was pumped from the former USTs excavation on November 8, 1990. On November 9, 1990 an additional 3,800 gallons of contaminated groundwater were removed and on November 10, 1990 approximately 5,000 gallons of groundwater were removed; this groundwater contained BTEX at concentrations of 0.4 mg/L, 0.7 mg/L, 0.3 mg/L and 1.0 mg/L, respectively. Concentrations of TPH as gasoline were below method detection limits. Approximately, 14,000 gallons of contaminated groundwater were ultimately removed and disposed.

Initial analyses for soil samples collected from the sidewalls of the UST excavation, at the Plaza Car Wash property, indicated concentrations of TPH as gasoline ranging to 1,890 mg/Kg; from the pump island areas TPH as gasoline ranged to 4,860 mg/Kg. On November 9, 1990 five soil samples were collected from the excavation ("approximately a foot from the groundwater table") containing TPH as gasoline (ranging from 440 mg/Kg to 1,300 mg/Kg). Two hundred cubic yards (cu yds) of this soil were removed and stockpiled on site. Approximately 650 cu yds of soil were finally excavated and stockpiled; six composite samples were collected and analyzed for TPH as gasoline and BTEX. TPH as gasoline concentrations ranged from 160 to 980 mg/Kg, benzene concentrations ranged from below method detection limits to 12 mg/Kg, toluene ranged from 4.3 mg/Kg to 53 mg/Kg, ethylbenzene ranged from 4.3 mg/Kg to 26.0 mg/Kg, and total xylenes ranged from 15 mg/Kg to 130 mg/Kg. The stockpiled gasoline contaminated soil was subsequently removed from the Plaza Car Wash property.

ACHCSA Inspection Report

The ACHCSA inspection report, for the UST tank removal and for the subsequent soil excavation from the Plaza Car Wash Property, indicated that the sidewall samples were below 100 mg/Kg and method detection limits. The gasoline Tank C, at the eastern end of the excavation had a "dime sized hole".

Mr. Ken Friedman
Albany Bowl Properties
July 12, 1991
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Discussion

Groundwater from monitoring well MW1, adjacent to and downgradient from the removed UST on the 500 San Pablo Avenue property, continues to report TPH as gasoline and BTEX that are below method detection limits.

Residual petroleum hydrocarbon contamination in the groundwater collected from monitoring well MW3 contains TPH as gasoline and BTEX. As indicated in ATT's October 17, 1990 report (ATT, 1990) the residual hydrocarbon concentrations in this well are a result of contaminated groundwater impacting the 450 San Pablo Avenue site from the adjacent Plaza Car Wash property at 400 San Pablo Avenue. Although this site is downgradient from the 450 San Pablo Avenue property, and much of the contamination source has been removed, the continued residual hydrocarbons contained in soil (probably above and below the groundwater table) as nonaqueous phase liquids (NAPLs) and soluble components will continue to impact groundwater. The B/TEX ratio (Table 2, Attachment A) indicates that the TPH as gasoline has aged (see ATT, 1990 report for explanation of B/TEX ratios). Therefore, it appears that much of the source for fresh gasoline, in the soil, was eliminated with the excavation of gasoline contaminated soil.

Conclusions and Recommendations

Groundwater collected and analyzed from monitoring well MW1 continues to have no detected hydrocarbons. A groundwater sample from monitoring well MW1 will be collected for the fourth quarter 1991. Analysis should be submitted to the RWQCB and the ACHCSA.

Although most of the contaminated soil on the Plaza Car Wash property was removed under the guidance of the ACHCSA, some residual concentrations may still be present because the final excavation was within approximately four to six feet from the edge of the car wash building. Therefore, until some remedial technology (such as pump and treat system) is installed on the Plaza Car Wash property, residual TPH as gasoline in the form of NAPLs and soluble components (BTEX) will continue to impact groundwater on the Plaza Car Wash site and the adjacent Albany Bowl property. This is particularly significant during periods of groundwater reversal.

Mr. Ken Friedman
Albany Bowl Properties
July 12, 1991
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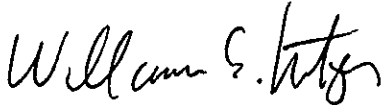
References cited in this report are in Attachment E. Limitations to this study are in Attachment F. If you have any questions or comments, please call.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.



Bruce Berman
Project Scientist



William E. Motzer, Ph.D.
Senior Hydrogeologist/Project Manager
California Registered Geologist No. 4202
(Expires 6-30-92)

BB/WEM:pd

Attachments

cc: Mr. Larry Seto - ACHCSA
Mr. Thomas Donnelly - Heller, Erhman, White & McAuliffe

ATTACHMENT A

Tables

Table 1. Summary of Groundwater Elevation Data
 Albany Bowl Properties
 450 San Pablo Avenue
 Albany, CA

Monitoring Well No.	TOC Elevation ^a (feet)	Date	Groundwater Depth (feet)	Groundwater Elevation (feet)
MW-1	100.87	9/6/90	5.32	95.55
		1/18/91	5.26	95.61
		4/18/91	5.43	95.44
MW-2	99.25	9/6/90	4.54	94.71
		1/18/91	4.48	94.77
		4/18/91	4.65	94.60
MW-3	100.2	9/6/90	5.20	95.00
		1/18/91	5.09	95.11
		4/18/91	5.25	94.95

a. Elevation from the top of the monitoring well casing (TOC) is relative to an assumed elevation datum of 100 feet for the northeast corner of East Bay Municipal District (EBMUD) utility box.

Table 2. Summary of Groundwater Sample Analyses
 Albany Bowl Properties
 450 San Pablo Avenue
 Albany, CA

Monitoring Well Number	Date Sampled	TOG	TPH-G	concentrations (mg/L)					
				B	T	E	X	B/TEX	Pb
MW-1	9-6-90	<5	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.040
	1-18-91	NA	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.040
	4-18-91	NA	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.040
MW-2	9-6-90	<5	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	-	<0.040
	1-18-91	NS	NS	NS	NS	NS	NS	-	NS
	4-18-91	NS	NS	NS	NS	NS	NS	-	NS
MS-3	9-6-90	<5	0.140	0.026	0.015	0.002	0.014	0.644	<0.040
	1-18-91	NS	NS	NS	NS	NS	NS	-	NS
	4-18-91	NS	0.270	0.130	0.010	0.005	0.010	3.73	<0.040

TOG = total oil and grease; method detection limit = 5 mg/L

TPH-G = total petroleum hydrocarbons as gasoline; method detection limit = 0.050 mg/L

B = benzene, T = toluene, E = ethylbenzene, X = total xylenes; method detection limit = 0.0005 mg/L

B/TEX = ratio of benzene (B) concentration multiplied by percent benzene in gasoline divided by the mean or average concentration of TEX multiplied by their respective average percents in gasoline as per LUFT (1989)

Pb = tetraethyl (organic) lead; method detection limit = 0.040 mg/L

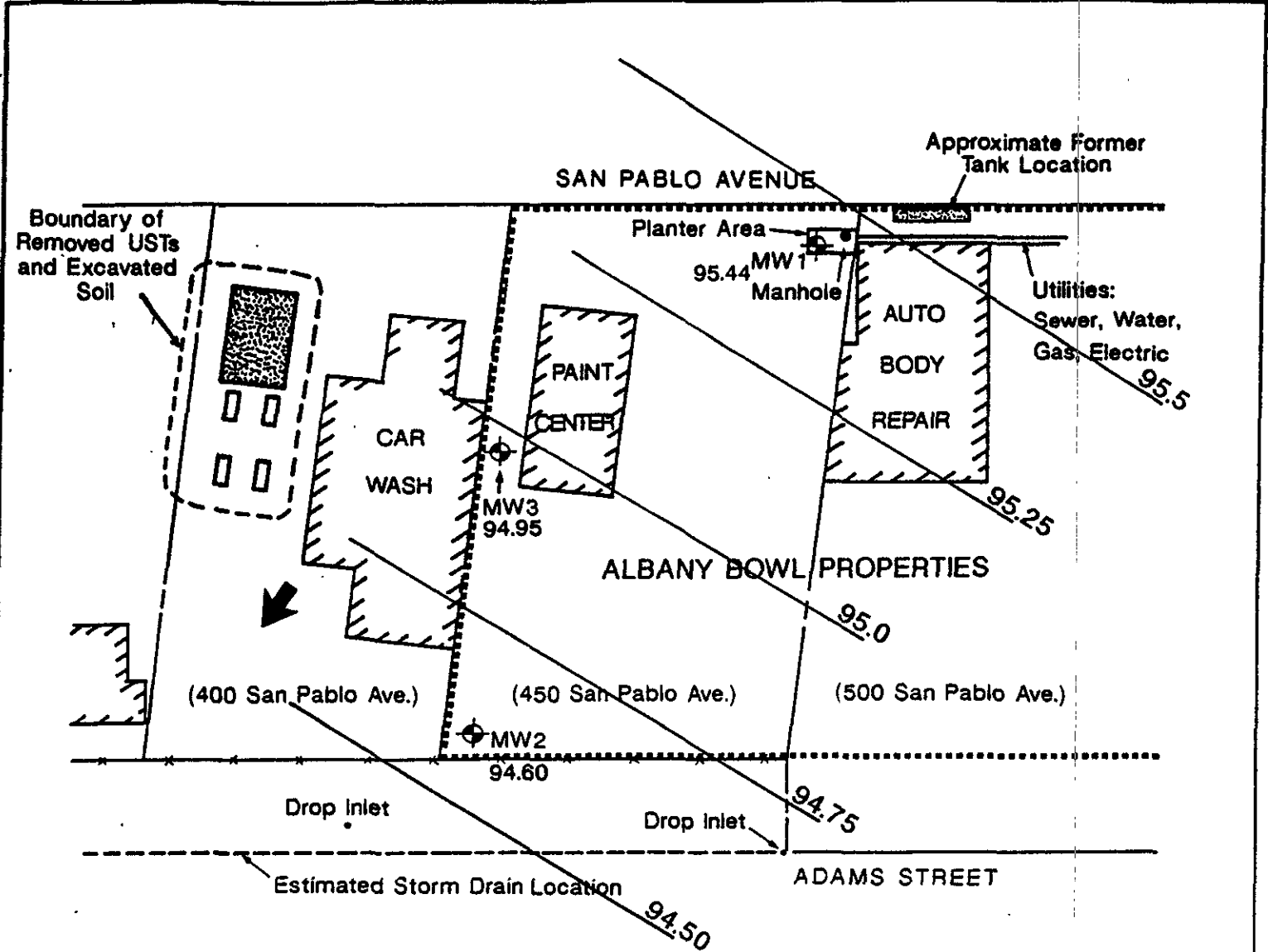
NS = Not sampled. Sampling of MW-2 and MW-3 not required for quarterly sampling as per agreement with ACHES.

Samples from these wells are to be collected and analyzed by Plaza Car Wash Property Owner.

NA = Not analyzed.

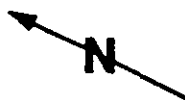
ATTACHMENT B

Plates



LEGEND

- Monitoring Well Location (approximate)
- Property Line
- Fence
- Existing Structure
- 95.0 Line of Equal Groundwater Elevation
- Groundwater Flow Direction



**Groundwater Elevations
4-18-91**

ATT

**Aqua Terra Technologies
Consulting Engineers
& Scientists**

Albany Bowl Properties

**JOB NUMBER
9064**

**DATE
6/91**

**PLATE
1**

ATTACHMENT C

**Soil & Groundwater Sample
Collection & Handling Protocol**

Sample Collection Records

ATTACHMENT C

SOIL & GROUNDWATER SAMPLE COLLECTION & HANDLING PROTOCOL

INTRODUCTION & PURPOSE

Because reliable and representative test results must be generated from soil and groundwater samples, it is essential to establish a sampling procedure which assures that all samples are:

- Collected by approved and repeatable methods
- Representative of the materials(s) at the desired location and depth
- Uncontaminated by container and sampling equipment

The following sampling protocol was designed to be a guide to the sampling and handling procedures for soil and groundwater samples. Based on conditions which may be encountered in the field, some modifications to this protocol may be required to fit the needs of an individual site.

SAMPLING PROCEDURES

Groundwater Sampling

Prior to collecting groundwater samples, monitoring wells were purged by bailing until pH, conductivity, and temperature levels stabilize. A minimum of four well casing volumes was purged from each well. Wells were purged and groundwater samples were obtained using a teflon bailer, or disposable polyethylene bailer, and nylon rope. New nylon rope is used for each well.

The appropriate number of sample containers and type were used for each sample collected, in accordance with the analytical laboratory requirements and EPA protocol. The bottles were filled using the bailer. All sample bottles were pre-cleaned by the supplier according to EPA protocols.

To prevent cross contamination of groundwater samples by the sampling equipment, all reusable equipment used in sampling was washed with a trisodium phosphate solution (TSP), triple rinsed with purified water, and allowed to air dry prior to each use. A sample of the purified water was retained for analysis as part of sample quality assurance.

Soil Sampling

After the soil sampler was driven to the desired depth and the samples were retrieved, each end of the tube containing the soil sample retained for laboratory analysis was sealed with teflon sheeting, covered with plastic end caps, and sealed with PVC tape. All sample containers (tubes) were steamed cleaned (or washed with TSP, as above) and air dried prior to use. The soil sample recovered in the tube just above the sample retained for chemical analysis was examined in the field for visual and olfactory indications of chemical contamination and used for lithologic description.

The Unified Soil Classification System (USCS) was used to log and describe the soil by the onsite geologist. These logs also include details of the sampling process such as depth, apparent odors, discoloration, and any other factors which may be required to evaluate the presence of contamination at the site.

POST SAMPLING PROCEDURES

One field/travel blank consisting of one sample bottle filled with purified water accompanied soil and groundwater sample containers at all times, including during transport to and from the site. Purified water field/travel blanks were analyzed according to the appropriate EPA Methods corresponding to the soil/groundwater sample analyses.

Sample containers were labeled with sample number, project number, date, and the initials of the person collecting the sample. A separate sample collection record was maintained for each groundwater sample collected.

Soil and groundwater samples collected were analyzed by an analytical laboratory certified by the California Department of Health Services (DHS). Quality assurance documentation accompanied all analytical reports generated by the laboratory.

The samples were placed in a cooler with dry ice (for soil samples) or bagged ice (for water samples) immediately following collection, and remained in the cooler until refrigerated at the analytical laboratory. The samples were delivered to the laboratory direct by courier or overnight freight within 48 hours of time of collection. Appropriate chain of custody forms were used for all samples.

RECORD OF GROUNDWATER LEVEL MEASUREMENTS

Page 1 of 1

Date Measured: 4 - 18 - 91 ATT Job No.: 9064

Site Location: ALBANY BOWL

Well location map attached? Yes No

Method of Measurement: Electric well sounder,
 _____ Other: _____

Weather/Visibility: SUNNY CLEAR WARM

Notes: _____

Well I.D.	Time (24 hr)	G.W.L. (1/100 ft)	G.W.L. 3x's?	B.O.W. (1/2ft)	Remarks
MW1	10:24	5.43	✓	19'	
MW2	10:27	4.65	✓		
MW3	10:35	5.25	✓	19'	WELL COVERED WITH WATER

Measured by (Signature): *DM [Signature]*

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 4-18-91 Sample I.D.: TB Job No.: 9064

Site Location: ALBANY Bowl ALBANY

No. of Containers : 3 / (check one): Well Samples;

Duplicates from well _____; Travel Blanks;

Field Blanks; Other (explain)/ _____

W.L. (1/100'): _____ Time : _____ B.O.W. (1/2'): _____

Method: Electric Well Sounder; Other/ _____

Con./pH meter calibrated: Y / N Well Loc. Map: Y / N

Calculated Purge Volume (4 casing volumes): _____ gallons

Purging Method: Disposable Bailer; Teflon Bailer;

Other/ _____

Time Start Purging (24 hr): _____, Product: Y / N
 Sheen: Y / N , Odor: Y / N , Vapor: _____ ppm / %LEL

Turbidity: _____, Color: _____

Time Stop Purging (24 hr): _____, Product: Y / N
 Sheen: Y / N , Odor: Y / N , Vapor: _____ ppm / %LEL

Turbidity: _____, Color: _____

	Temp.	pH	Cond.	Purge Vol.	Time
First :	_____	_____	_____	_____	_____
Second:	_____	_____	_____	_____	_____
Final :	_____	_____	_____	_____	_____

Sample Collection Time (24 hr): 9:35

Notes: _____

Collected By (signature): [Signature]

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 4-18-91 Sample I.D.: MW 1 Job No.: 9064

Site Location: ALBANY Base Albany

No. of Containers : 4 / (check one): Well Samples;
 Duplicates from well _____; Travel Blanks;
 Field Blanks; Other (explain)/ _____

W.L. (1/100'): 543' Time : 10:24 B.O.W. (1/2'): 19'

Method: Electric Well Sounder; Other/ _____

Con./pH meter calibrated: / N Well Loc. Map: / N

Calculated Purge Volume (4 casing volumes): 9 gallons

Purging Method: Disposable Bailer; Teflon Bailer;
 Other/ _____

Time Start Purging (24 hr): 11:14, Product: Y / N
 Sheen: Y / N, Odor: Y / N, Vapor: _____ ppm / %LEL
 Turbidity: N, Color: N

Time Stop Purging (24 hr): 11:25, Product: Y / N
 Sheen: Y / N, Odor: Y / N, Vapor: _____ ppm / %LEL
 Turbidity: LITE, Color: LITE Blue

	Temp.	pH	Cond.	Purge Vol.	Time
First :	<u>18°</u>	<u>7.03</u>	<u>0530_{us}</u>	<u>3</u>	<u>11:17</u>
Second:	<u>18°</u>	<u>7.04</u>	<u>0530_{us}</u>	<u>6</u>	<u>11:22</u>
Final :	<u>18°</u>	<u>7.08</u>	<u>0530_{us}</u>	<u>9</u>	<u>11:25</u>

Sample Collection Time (24 hr): 11:30

Notes: _____

Collected By (signature): *DM Peoufly*

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 4-18-19 Sample I.D.: MW3 Job No.: 9064
 Site Location: Army Base Army
 No. of Containers: 4 / (check one): Well Samples;
 Duplicates from well _____; Travel Blanks;
 Field Blanks; Other (explain) / _____

W.L. (1/100'): 5.25' Time: 10:35 B.O.W. (1/2'): 19'
 Method: Electric Well Sounder; Other / _____
 Con./pH meter calibrated: / N Well Loc. Map: / N
 Calculated Purge Volume (4 casing volumes): 9 gallons
 Purging Method: Disposable Bailer; Teflon Bailer;
 Other / _____

Time Start Purging (24 hr): 10:44, Product: Y / N
 Sheen: Y / N, Odor: / N, Vapor: _____ ppm / %LEL
 Turbidity: LITE, Color: LITE-BROWN

Time Stop Purging (24 hr): 10:57, Product: Y / N
 Sheen: Y / N, Odor: Y / N, Vapor: _____ ppm / %LEL
 Turbidity: LITE-MED, Color: LITE-BROWN

	Temp.	pH	Cond.	Purge Vol.	Time
First :	<u>18°</u>	<u>6.92</u>	<u>0580_{us}</u>	<u>3</u>	<u>10:49</u>
Second:	<u>18°</u>	<u>6.97</u>	<u>0560_{us}</u>	<u>6</u>	<u>10:54</u>
Final :	<u>18°</u>	<u>6.99</u>	<u>0560_{us}</u>	<u>9</u>	<u>10:57</u>

Sample Collection Time (24 hr): 11:00

Notes: _____

Collected By (signature): [Signature]

ATTACHMENT D

**DHS Certified Laboratory Data
Chain of Custody**

ANAMETRIX INC

Environmental & Analytical Chemistry
 1961 Concourse Drive, Suite E, San Jose, CA 95131
 (408) 432-8192 • Fax (408) 432-8198

**REPORT**

MR. BRUCE BERMAN
 AQUA TERRA TECHNOLOGIES
 2950 BUSKIRK AVENUE, SUITE 120
 WALNUT CREEK, CA 94596

Workorder # : 9104174
 Date Received : 04/18/91
 Project ID : 9064
 Purchase Order: N/A

The following samples were received at Anamatrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9104174- 1	TB
9104174- 2	MW1
9104174- 3	MW3

This report consists of 7 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anamatrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anamatrix.

Sarah Schoen, Ph.D.
 Laboratory Manager

4-29-91

Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. BRUCE BERMAN
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9104174
Date Received : 04/18/91
Project ID : 9064
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9104174- 1	TB	WATER	04/18/91	TPHg/BTEX
9104174- 2	MW1	WATER	04/18/91	TPHg/BTEX
9104174- 3	MW3	WATER	04/18/91	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. BRUCE BERMAN
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9104174
Date Received : 04/18/91
Project ID : 9064
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for this workorder.

Cheryl Balmer 4/25/91
Department Supervisor Date

Gene Jusick 04-25-91
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9104174
Matrix : WATER
Date Sampled : 04/18/91

Project Number : 9064
Date Released : 04/25/91

Reporting Limit	Sample I.D.# TB	Sample I.D.# MW1	Sample I.D.# MW3	Sample I.D.# 12B0422A
COMPOUNDS (ug/L)	-01	-02	-03	BLANK
Benzene	0.5	ND	ND	130
Toluene	0.5	ND	ND	10
Ethylbenzene	0.5	ND	ND	5
Total Xylenes	0.5	ND	ND	10
TPH as Gasoline	50	ND	ND	270
% Surrogate Recovery	90%	104%	110%	92%
Instrument I.D.	HP12	HP12	HP12	HP12
Date Analyzed	04/22/91	04/22/91	04/22/91	04/22/91
RLMF	1	1	5	1

ND - Not detected at or above the practical quantitation limit for the method.
 TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
 BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020.
 RLMF - Reporting Limit Multiplication Factor.
 Anamatrix control limits for surrogate recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Kevin Jurisot 04-25-91
Analyst Date

Cheryl Balmer 4/25/91
Supervisor Date

BTEX MATRIX SPIKE REPORT
 EPA METHOD 5030 WITH GC/PID
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 9064 MW1
 Matrix : WATER
 Date Sampled : 04/18/91
 Date Analyzed : 04/22/91

Anamatrix I.D.: 9104174-02
 Analyst : IY
 Supervisor : CB
 Date Released : 04/25/91

COMPOUND	SPIKE AMT. (ug/L)	MS (ug/L)	REC MS	MSD (ug/L)	REC MSD	RPD	%REC LIMITS
Benzene	5.0	5.3	106%	5.5	110%	4%	46-149
Toluene	5.0	5.5	110%	5.2	104%	-6%	43-146
Ethylbenzene	5.0	4.9	98%	5.1	102%	4%	51-138
M+P-Xylenes	3.3	4.1	123%	4.1	123%	0%	39-161
O-Xylene	1.7	2.2	132%	2.2	132%	0%	37-156
P-BFB			103%		106%		53-147%

* Limits established by Anamatrix, Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. BRUCE BERMAN
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9104174
Date Received : 04/18/91
Project ID : 9064
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9104174- 2	MW1	WATER	04/18/91	ORG Pb
9104174- 3	MW3	WATER	04/18/91	ORG Pb

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. BRUCE BERMAN
AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

Workorder # : 9104174
Date Received : 04/18/91
Project ID : 9064
Purchase Order: N/A
Department : METALS
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Michael A. H. Berman 4/29/91
Department Supervisor Date

Mona Kamel 4/26/91
Chemist Date

ANALYSIS DATA SHEET - ORGANIC LEAD
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9104174
 Matrix : WATER
 Date Sampled : 04/18/91
 Project Number: 9064

Date Prepared : 04/24/91
 Date Analyzed : 04/25/91
 Date Released : 04/26/91
 Instrument I.D.: AA1

ELEMENTS		Organic Lead
EPA METHOD		LUFT
REPORTING LIMIT		40.0
ANAMETRIX ID	CLIENT ID	(ug/L)
9104174-02	MW1	ND
9104174-03	MW3	ND
OMB0424W	METHOD BLANK	ND

ND : Not detected at or above the practical quantitation limit for the method.

Organic Lead by Leaking Underground Fuel Tank (LUFT) Manual, 1987
 California State Water Resources Control Board.

Marylouise 4/29/91
 Chemist Date

Mona Kamel 4/26/91
 Chemist Date

ANAMETRIX, INC.
1961 Concourse Drive, #E, San Jose, CA. 95131
(408) 432-8192
LOG IN FORM and INTERNAL CHAIN OF CUSTODY

04/18/91 14:17:26

ANAMETRIX
workorder: # 9104174
report to: AQUA TERRA TECHNOLOGIES
2950 BUSKIRK AVENUE, SUITE 120
WALNUT CREEK, CA 94596

p.o #: N/A
project #: 9064

phone # : (415)934-4884
fax phone: (415)934-0418
attention: MR. BRUCE BERMAN

date received: 04/18/91
date due : 05/02/91

WORKORDER	SAMPLE ID	MATRIX	METHOD	FRIG ID#	CONTAINER	DATE SAMPLED
9104174- 2	MW1	WATER	ORG Pb	10/24	1 X 1 LITER	04/18/91
9104174- 3	MW3	WATER	ORG Pb	10/24	1 X 1 LITER	04/18/91
9104174- 1	TB	WATER	TPHg/BTEX	2	3 X 40ML	04/18/91
9104174- 2	MW1	WATER	TPHg/BTEX	2	3 X 40ML	04/18/91
9104174- 3	MW3	WATER	TPHg/BTEX	2	3 X 40ML	04/18/91

COMMENTS : #1 IS A TRAVEL BLANK. THANKS NS.

Custodian's Signature



Date/Time into Refrigerator

04/18/91 9:45

14.15

Aqua Terra Technologies, Inc.
 2950 Buskirk Avenue, Ste. 120
 Walnut Creek, CA 94598
 Tel. (415) 934-4884
 Fax. (415) 934-0418

9104174

(2) (10/24) ATT

CHAIN OF SAMPLE CUSTODY RECORD
 (original document, please return)

Page 1 of 1

Sampled By: DAVID BEARDSLEY

Date Sampled: 4.18.91

Signature: [Signature]

ATT Job #: 9064

Lab Name: ANALYTIX

Results To Be Sent To: BRUCE BERMAN

Contact: _____

Results Needed By: 10 Day Turnaround

Phone #: (408) 432-8192

Fax Results ASAP

Lab Job #: _____

①
②
③

Sample Collection				Sample Preservation			Sample Containers		Analysis/EPA Method No.						Remarks	
Sample I.D.	Time (24 hr)	Matrix (e.g. Water, Soil)	Number of Containers	Ice	HCL	Dry Ice	40 mL VOA	1 L AMBER	BTEX	TPH G	ORGANIC LEAD					
TRB	9:35	Water	3	✓	✓		✓	✓	✓	✓						no bottles
MW1	11:30	"	4	✓	✓		✓	✓	✓	✓						wild pipe
MW3	11:00	"	4	✓	✓		✓	✓	✓	✓						containers preserved vials (2)

Notes:

Relinquished by/ Company Affiliation	Date	Time	Received by: Company Affiliation	Date	Time
<u>[Signature]</u>	<u>4.18.91</u>	<u>13:24</u>	<u>[Signature]</u>	<u>01/18/91</u>	<u>1304</u>

ATTACHMENT E

References

REFERENCES CITED

Aqua Terra Technologies, Inc. (ATT), 1990, Tank Closure and Monitoring Well Installation, 450 and 500 San Pablo Avenue, Albany, CA: ATT unpublished report, October 17, 1990, 10 p. with Attachments.

Soil Tech Engineering, Inc. (STE), 1991, Underground Tank Soil Sampling and Excavation Report for Kamur Industries, Inc. Plaza Car Wash Site Located at 400 San Pablo Avenue, Albany, California: STE unpublished report, January 15, 1991.

ATTACHMENT F

Limitations and Uncertainty

LIMITATIONS AND UNCERTAINTY

This report was prepared in general accordance with the accepted standard of practice which exists in Northern California at the time the investigation was performed and within the scope of services outlined in our proposal. It should be recognized that the definition and evaluation of surface and subsurface environmental conditions is a difficult and inexact science. Judgements leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. It is possible that variations in the soil and/or groundwater conditions could exist beyond the points explored for this investigation. Also changes in groundwater conditions could occur sometime in the future due to variations in tides, rainfall, temperature, local or regional water use or other factors. If the client wishes to reduce the uncertainty beyond the level associated with this study, ATT should be notified for additional consultation.

The discussion and recommendations presented in this report are based on: 1) monitoring well installations, 2) the observations of field personnel, 3) the results of laboratory analysis performed by a California Department of Health Services certified laboratory, and 4) interpretations of current federal, state, and local regulations and/or ordinances.

Chemical analytical data included in this report have been obtained from a state certified laboratory. The analytical methods employed by the laboratory were in accordance with procedures suggested by the U.S. Environmental Protection Agency and the State of California. ATT is not responsible for laboratory errors in procedures or reporting.

ATT has conducted this investigation in a manner consistent with the level of care and skill ordinarily exercised by members of the environmental consulting profession currently practicing under similar conditions in Northern California. ATT has prepared this report for the client's (and assigned parties) exclusive use for this particular project. No other warranties, expressed or implied, as to the professional advice provided are made.