HELLER, EHRMAN, WHITE & McAULIFFE
ATTORNEYS
A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

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91 SEP 32 AM 11:23

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550 WEST 7TH AVENUE
ANCHORAGE, ALASKA 99501-3571
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16341-0001

October 2, 1991

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:

Enclosed please find the Fourth Quarter Groundwater Monitoring Report prepared by Aqua Terra Technologies for the above-referenced Albany Bowl property. 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. Because there have been four consecutive monitoring events with no detectable concentrations of these contaminants, ATT recommends closure of this well.

Please review the enclosed report and let me know whether the County agrees that this monitoring well can be closed. I look forward to hearing from you soon.

Sincerely yours,

Thomas M. Donnelly

Enclosures

cc with encl: Richard Hiett
cc w/no encl: Ken Friedman
Bill Motzer

ATT

September 26, 1991

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

Subject: **Fourth Quarter Groundwater Sample Analyses for Monitoring Well MW1**
450 - 500 San Pablo Avenue
Albany, California
(Project No. 9064)

Aqua Terra Technologies
Consulting Engineers
& Scientists

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

Dear Mr. Friedman:

Aqua Terra Technologies, Inc. (ATT) is pleased to provide you with the chemical analyses for the fourth quarter sampling event for monitoring well MW1 at 450 - 500 San Pablo Avenue in Albany, California. ATT has conducted quarterly sampling and analysis of groundwater samples, from monitoring well MW1, in accordance with the recommendations in ATT's October 17, 1990 report (*Tank Closure Report and Monitoring Well Installation*), the Alameda County Health Care Services Agency (ACHCSA) letter of October 26, 1990, and ATT's July 12, 1991 report (*Third Quarter, Groundwater Analysis for Monitoring Well MW-1*).

Groundwater sample analyses are summarized on Table 1 (Attachment A). Samples were collected in accordance with the protocol in Attachment B. The signed laboratory analytical report, chain of custody document, and sample collection records are in Attachment C. There were no detectable concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene, and total xylenes (BTEX) or tetra ethyl (organic) lead in the MW1 groundwater sample for this and previous quarters. Therefore, because there have been four consecutive monitoring events with no detectable concentrations of TPH as gasoline, BTEX, or organic lead in water samples collected from monitoring well MW1, ATT recommends closure of this well; no further work for this property should be required.

Copies of this report should be submitted to the Alameda County Health Care Services Agency (ACHCSA) and to the San Francisco Bay Region of the Regional Water Quality Control Board (RWQCB).

Limitations to this study are in Attachment D.

Please contact us if you have any questions or comments regarding the contents of this letter.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.

Bruce Ben

for Kimberly S. Lagomarsino
Project Scientist

William E. Motzer

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

KSL/WEM:mp

Attachments

cc: Larry Seto, ACHCSA
Richard Hiatt, RWQCB
Thomas M. Donnelly, Heller, Erhman, White & McAuliffe

ATTACHMENT A

Table

Table 1. Summary of Analytical Results
Groundwater Samples
450-500 San Pablo Avenue
Albany, California

Sample/ Well I.D.	Sampling Interval	Sampling Date	Concentration in μg/L					
			TPH-G[a]	B[b]	T[b]	E[b]	X[b]	Pb[c]
MW1	First Quarter Sampling Event	09-06-90[d]	<50	<0.5	<0.5	<0.5	<0.5	<40
MW1	Second Quarter Sampling Event	01-18-91	<50	<0.5	<0.5	<0.5	<0.5	<40
MW1	Third Quarter Sampling Event	04-18-91	<50	<0.5	<0.5	<0.5	<0.5	<40
MW1	Fourth Quarter Sampling Event	07-31-91	<50	<0.5	<0.5	<0.5	<0.5	<40

a. TPH-G: total petroleum hydrocarbons as gasoline. Detection limit equals 50 μg/L.
b. BTEX: benzene, toluene, ethylbenzene, and total xylenes. Detection limit equals 0.5 μg/L.
c. Pb: tetra ethyl (organic) lead. Detection limit equals 40 μg/L.
d. Analytical results for this sampling date were originally presented in the following report:
AQUA TERRA TECHNOLOGIES, INC. (ATT), 1990; *Tank Closure Report and Monitoring Well Installation*: ATT unpublished report (October 17, 1990) 10p., with attachments.

ATTACHMENT B

Soil & Groundwater Sample Collection & Handling Protocol

ATTACHMENT B

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 polyethelene 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.

ATTACHMENT C

Laboratory Analytical Report
Chain of Custody
Sample Collection Records

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Bruce Berman
Aqua Terra Technology
2950 Buskirk Ave., Ste 120
Walnut Creek, CA 94596

Date: 08-19-91
NET Client Acct. No: 435
NET Pacific Log No: 9016
Received: 08-02-91 0800

Client Reference Information

Job: 9064

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

NET Pacific, Inc

Client Acct: 435 Date: 08-19-91
Client Name: Aqua Terra Technology Page: 2
NET Log No: 9016

Ref: Job: 9064

SAMPLE DESCRIPTION: FB 07-31-91 1110
LAB Job No: (-93557)

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			08-07-91	
METHOD GC FID/5030			--	
as Gasoline		0.05	ND	mg/L
METHOD 602			--	
DILUTION FACTOR *			1	
DATE ANALYZED			08-07-91	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L

NET Pacific, Inc

Client Acct: 435 Date: 08-19-91
®Client Name: Aqua Terra Technology Page: 3
NET Log No: 9016

Ref: Job: 9064

SAMPLE DESCRIPTION: MW-1 07-31-91 1133
LAB Job No: (-93558)

Parameter	Method	Reporting Limit	Results	Units
Organic Lead	DHS LUFT	1	ND	mg/L
PETROLEUM HYDROCARBONS			--	
VOLATILE (WATER)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			08-07-91	
METHOD GC FID/5030			--	
as Gasoline		0.05	ND	mg/L
METHOD 602			--	
DILUTION FACTOR *			1	
DATE ANALYZED			08-07-91	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L

Ref: Job: 9064

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	103	ND	110	111	< 1
Benzene	0.5	ug/L	82	ND	104	107	2.9
Toluene	0.5	ug/L	84	ND	103	106	2.3
Gasoline	0.05	mg/L	103	ND	105	113	7.1
Benzene	0.5	ug/L	82	ND	93	104	12
Toluene	0.5	ug/L	84	ND	94	94	< 1

COMMENT: Blank Results were ND on other analytes tested.

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Organic Lead	1	mg/L	103	ND	57	66	15

NET Pacific, Inc.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

Aqua Terra Technologies, Inc.
2950 Buskirk Avenue, Ste. 120
Walnut Creek, CA 94596
Tel. (415) 934-4884
Fax. (415) 934-0418

CHAIN OF SAMPLE CUSTODY RECORD

(original document, please return)

9016

ATT

Sampled By: DAVID BEARDSLEY

Signature: [signature]

Results To Be Sent To: BRUCE BERMAN

Results Needed By: STANDARD TURNAROUND

Fax Results ASAP ☐

Date Sampled: 7·31·91

ATT Job #: 9064

Lab Name: NET

Contact: KELLEY

Phone #: (707) 526-7200

Lab Job #:

Sample I.D.	Time (24 hr)	Matrix (e.g. Water, Soil)	Number of Containers	Ice	HCL	Dry Ice		40ml VOA	1L AMBER			TPH G	BTEX	ORGANIC LEAD				Remarks
FB	11:10	WATER	3	✓	✓			3				✓	✓					
MW1	11:33	"	4	✓	✓			3	1			✓	✓	✓				

Column groups: Sample Collection (Sample I.D., Time, Matrix, Number of Containers); Sample Preservation (Ice, HCL, Dry Ice); Sample Containers (40ml VOA, 1L AMBER); Analysis/EPA Method No.

Notes:

CUSTODY SEALED 8/1/91
@ 1900 [illegible]

Relinquished by/ Company Affiliation	Date	Time	Received by: Company Affiliation	Date	Time
[signature]	8·1·91	2:15	[signature]	8/1/91	215pm
[signature]	8/1/91		(VIA NCS)		
			[signature]	8/2/91	0800

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 7-31-91 Sample I.D.: MW1 Job No.: 9064

Site Location: ALBANY BOWL ALBANY

No. of Containers : 4 /(check one): ✓ Well Samples;

___ Duplicates from well _____; ___ Travel Blanks;

___ Field Blanks; ___ Other (explain)/_____

W.L.(1/100'): 5.55 Time : 11:07 B.O.W.(1/2'): 19.0'

Method: ✓ Electric Well Sounder; ___ Other/_____

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

Calculated Purge Volume (4 casing volumes): 9 gallons

Purging Method: ✓ Disposable Bailer; ___ Teflon Bailer;

___ Other/_____

Time Start Purging (24 hr): 11:17, Product: Y / (N)
Sheen: Y / (N), Odor: Y / (N), Vapor: ___ ppm / %LEL

Turbidity: LIGHT, Color: BROWN

Time Stop Purging (24 hr): 11:29, Product: Y / (N)
Sheen: Y / (N), Odor: Y / (N) Vapor: ___ ppm / %LEL

Turbidity: LIGHT, Color: BROWN

	Temp.	pH	Cond.	Purge Vol.	Time
First :	19°C	6.95	0580 µs	3	11:21
Second:	19°C	6.99	0530 µs	6	11:25
Final :	19°C	7.00	0530 µs	9	11:29

Sample Collection Time (24 hr): 11:33

Notes: SMELL PAINT FUMES FROM AUTO BODY SHOP NEXT DOOR

Collected By (signature): _____

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 7-31-91 Sample I.D.: MFR Job No.: 9064

Site Location: ALBANY BASE 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): 11:10

Notes: TAKEN FROM PRECLEANED DISPOSABLE BAILER

Collected By (signature): [signature]

ATTACHMENT D

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 conducted 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 generally are 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) information and data provided by third party consultants, 2) the exploratory test borings drilled at the site, 3) the observations of field personnel, 4) the results of laboratory analysis by a California Department of Health Services certified laboratory, and 5) interpretations of federal, state, and local regulations and/or ordinances.

Chemical analytical data included in this report have been obtained from state certified laboratories. The analytical methods employed by the laboratories 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.