HELLER EHRMAN WHITE & McAULIFFE

ATTORNEYS

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

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ANCHORAGE
LOS ANGELES
PALO ALTO
PORTLAND
SEATTLE
TACOMA

May 25, 1993

16341-0001

Ms. Juliet Shin
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621

Albany Bowl Property
450 San Pablo Avenue, Albany, California

Dear Ms. Shin:

I am forwarding to you on behalf of our client, Albany Bowl Properties ("Albany Bowl"), copies of two reports prepared by Albany Bowl's consultant, H+GCL. The first report, entitled "Pumping Test Investigation for the City of Albany Sewer Pipe Trench Excavation," describes the results of the pumping test performed on the groundwater monitoring well STMW-2 located on the adjacent Plaza Car Wash property (400 San Pablo Avenue). The second report, entitled "Closure Request for Groundwater Monitoring Wells MW-2 and MW-3," requests closure of the two remaining wells located on the 450 San Pablo Avenue property.

The first report confirms what we have suspected all along. When Plaza Car Wash ran a pump test on its monitoring well STMW-2 in August 1992, the concentration of gasoline-related contamination in Albany Bowl's monitoring well MW-3 -- located adjacent to the Plaza Car Wash property -- decreased to non-detect. This occurred despite the fact that STMW-2 is not properly constructed as a groundwater extraction well. It is clear that Plaza Car Wash could contain its contamination on-site and remove the contamination that has migrated to the Albany Bowl property by installing a properly constructed groundwater extraction well (or series of wells) in the center of its property and pumping and treating the contaminated groundwater.

In the second report, H+GCL requests closure of the two wells remaining on the Albany Bowl property. As noted in this report, these wells were constructed in connection with a property transfer evaluation, and were not required by the County or the Regional Board in connection with the investigation of the former underground storage tanks located on the Albany Bowl property. Groundwater monitoring well MW-2 has never shown any gasoline-related contamination. Groundwater monitoring well MW-3 has shown some contamination, but this comes from the Plaza Car Wash property.

Albany Bowl has been quite cooperative in allowing Plaza Car Wash virtually unimpeded access to MW-3 in connection with its groundwater investigation. However, despite your request, Plaza Car Wash has made no effort whatsoever to negotiate an access agreement with Albany Bowl that would protect our client's interests. Albany Bowl is not willing to continue to give Plaza Car Wash free access to this well without Plaza Car Wash agreeing that it will be fully responsible for maintaining and closing that well, and that it will cover any damage that might occur to the Albany Bowl property in connection with Plaza Car Wash's investigation activities. Unless Plaza Car Wash is willing to negotiate an access agreement, then Albany Bowl respectfully requests closure of MW-3. Plaza Car Wash can install an upgradient well somewhere on its property.

Albany Bowl has been attempting to develop its property for quite sometime now. These efforts have been impeded, however, by the uncertainty surrounding whether Plaza Car Wash will be required to extend its investigation onto the Albany Bowl property. If additional wells will have to be installed, we need to know. If monitoring wells MW-2 and MW-3 can be closed, we need to know that too. We are more than willing to cooperate with the County -- as we have done so in the past -- but we need some clear indication from the County as to what it will require from Plaza Car Wash so that Albany Bowl may proceed with its development plans.

We hope you find the enclosed reports useful. We look forward to your response to our request for closure of MW-2 and MW-3, and whether any further investigation will be required on the Albany Bowl property.

Very truly yours,

Thomas M. Donnelly

cc w/o encl.: Ken Friedman
William E. Motzer

H+GCL
Environmental Scientists and Engineers

2200 Powell Street, Ste. 880 • Emeryville, CA 94608
(510) 547-3886 • FAX: (510) 547-3631

May 14, 1993

Mr. Ken Friedman
Albany Bowl Properties
540 San Pablo Avenue
Albany, CA 94607

Re: Pumping Test Investigation for the City of Albany Sewer Pipe Trench Excavation, 450 San Pablo Avenue, Albany, California

Dear Mr. Friedman:

At your request, H+GCL, Inc. (H+GCL) has prepared this report on the August 27 and 28, 1992 pumping test conducted on groundwater monitoring well STMW-2 on the adjacent Plaza Car Wash property (400 San Pablo Avenue). This test was performed by the City of Albany Public Works Department and Harlan Tait Associates (environmental engineering consultants for the City of Albany). The purpose of the pumping test was to determine if groundwater table drawdown, in this monitoring well (STMW-2), could affect the groundwater table and flow in the nearby monitoring well MW-2 (located across the property boundary on the 450 San Pablo Avenue property). This would help in determining whether groundwater extraction from well STMW-2 could be used to prevent gasoline contaminated groundwater from flowing to the 450 San Pablo Avenue property sewer trench during dewatering operations.

Background - Public Sewer Line Excavation on the 450 San Pablo Avenue Property

On August 24, 1992, John Carollo Engineers, contractors for the City of Albany Public Works Department, excavated a trench, to install a sewer line, on the 450 San Pablo Avenue property (Albany Bowl Properties) in the parking lot (north of the Paint store) between groundwater monitoring wells MW-1 and MW-3; the trench was located approximately 15 feet (ft) downgradient from monitoring well MW-1. The trench was dug below the shallow, unconfined groundwater table. The contractor proceeded to dewater the trench, with a pump, removing up to 15 to 20 gallons of water per minute. The onsite Albany Bowl Properties' consulting geologist [Aqua Terra Technologies, Inc. (ATT)] became concerned that dewatering of the trench might result in gasoline contaminated groundwater flowing from the adjacent Plaza Car Wash property to the 450 San Pablo Avenue property. (Previous concerns that this might occur were also voiced to the City of Albany on August 20, 1992 by Mr. Ken Friedman and Mr. Thomas Donnelly, Albany Bowl's attorney.) Therefore, on August 24, the City of Albany, at the request of Mr. Friedman and his

attorney, immediately stopped pumping and trenching operations until alternative procedures could be found.

City of Albany Pumping Test

On August 25, 1992, a meeting was held at the Albany City Hall; it was attended by all concerned parties. At this meeting, it was decided that before additional trench work could be continued, a pumping test should be performed on the monitoring well located in the middle of the adjacent Plaza Car Wash property to determine whether an effective capture zone existed. It was agreed that monitoring well STMW-2 should be used, because this well was located near the source of the contaminated groundwater and, therefore, it would most likely prevent that gasoline contaminated groundwater from moving offsite. The 24-hour pumping test would be conducted by the City of Albany Public Works department; it began on August 27, 1992. Readings were taken by Mr. John Bomar and Mr. Jason Baker of the City of Albany Public Works (Attachment A).

A meeting was held at the Albany City Hall on August 31, 1992 at 3:00 P.M. Mr. David H. Connell (Geological Engineer for Harlan Tait Associates) discussed the results of the pumping test. These were:

(1) The pumping test began with an average flow rate of 3.0 gallons per minute (gal/min) which decreased to 1.6 gal/min. Mr. Connell indicated that three hydraulic conductivities were calculated: K = 0.02 ft/min, K = 0.24 ft/min, and K = 0.007 ft/min.

(2) Pumping from the open trench on the 450 San Pablo Avenue property at 10 to 20 gal/min would cause a groundwater table drawdown of 1.0-ft at the property boundary (between the 450 San Pablo Avenue and Plaza Car Wash properties). This would probably cause gasoline contaminated groundwater from the Plaza Car Wash property to flow and impact the 450 San Pablo Avenue property.

(3) Pumping from the existing Plaza Car Wash well (during the open trench pumping) would not stop the movement of gasoline contaminated groundwater from the Plaza Car Wash property to the 450 San Pablo Avenue property. Therefore, an alternative procedure must be found.

The reason for the low groundwater withdrawal rate from monitoring well STMW-2, was that this well was completed at approximately 10- to 11-feet below grade. Although there were no available boring logs for the Plaza Car Wash well, soil boring logs from the adjacent 450 San Pablo Avenue property monitoring wells MW-1, MW-2, and MW-3 (see ATT, 1992), indicated that soils in the area (to approximately 10- to 14-ft below grade) consisted of silty clay to clayey silt (CL/ML and CL/SC). Below 14.0-ft the soil changed to a clayey gravel/sand to sandy/gravelly clay (GC/SC-CL); at approximately 19.0 to 20.0 ft below grade the soil is composed of fine to very fine sand (SW). These soil compositions were confirmed during the City of Albany's trench excavation. Soils from the surface to approximately 15.0-ft below grade were clay-rich; below 15.0-feet, the soils were very sandy. Also, calcium carbonate deposits (caliche) lines were observed in the trench (in the clay-rich) zone at various depths, beginning from approximately 8.0-ft below grade, indicating a fluctuating, unconfined groundwater table.

Because of the pumping test, the contractor indicated that they could implement an alternative construction procedure involving the natural drainage of groundwater to the west. All parties agreed that the trench should be so constructed to allow groundwater to naturally drain to the west (towards Adams Street). Therefore, the trench and the installed sewer pipe were subsequently completed by allowing groundwater to naturally drain to the west.

Conclusion and Recommendation

The pumping test conducted by the City of Albany on monitoring well STMW-2, located in the source area of gasoline contaminated groundwater found beneath the Plaza Car Wash, indicated that pumping groundwater from this well, during dewatering of the trench, would not effectively contain gasoline contaminated groundwater on the Plaza Car Wash property.

However, groundwater samples collected and analyzed by ATT, just after the pumping test, showed that even with an ineffective capture zone, total petroleum hydrocarbons (TPH) as gasoline, benzene, toluene, ethylbenzene, and total xylenes (BTEX) could be reduced to nondetectable levels (see H^+GCL May 12, 1993 letter report: *Closure Request for Groundwater Monitoring Wells MW-2 and MW-3, 450 San Pablo Avenue, Albany, California*).

Therefore, to prevent gasoline contaminated groundwater from further impacting the 450 San Pablo Avenue property, an extraction well of sufficient depth (completed to 20- to 25-ft below grade) should be constructed near the center of the Plaza Car Wash property but in proximity to the removed Plaza Car tanks. This well would be used, in conjunction with other extraction wells, to remediate the gasoline contaminated groundwater.

The references cited are in Attachment B. If you have any questions or comments concerning this report, please call.

Sincerely,

H⁺GCL, Inc.

William E. Motzer, Ph.D., R.G.
Director Hydrogeology/Environmental Engineering Services

Attachments:
cc: Ms. Juliette Shin, ACHCSA
Mr. Thomas Donnelly, Heller, Ehrman, White & McAuliffe

H⁺GCL Environmental Scientists and Engineers

ATTACHMENT A

City of Albany Pumping Test Data Sheets

MURRAY
284.7936

for Albany Bowl

PUMP TEST READINGS

FRANK HENADI 408-988-3343
DAVE 415-255-2431

Project: SAN PABLO SEWER PROJECT
Location: @ CAR WASH & ALBANY BOWL

Date: 8-27-92

Readings by: JOHN BOMAR, JASON BAKER

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To	BILL MOLZAN	From	CITY OF ALBANY
Co.		Co.	
Dept.		Phone #	
Fax #		Fax #	

Time PM	Elapsed Time Hr:Min	Water Meter Reading	Depth							
			Albany Bowl Property							
			MW-1	MW-2	MW-3	Pumphole	STMW-1	STMW-2	MW-2	MW-3
12:40	0	22.2	5.70	5.00	5.59	5.68	5.90	5.81	4.51	5.42
12:45	:5					8.42				
12:50	:10					8.60				
12:55	:15					9.00				
1:00	:20					9.22				
1:05	:25					9.42				
1:10	:30	119.2	5.72	5.00	5.62	9.60	5.97	5.86	4.56	5.44
1:40	1:00	204.3	5.72	5.00	5.62	9.90	6.00	5.88	4.56	5.44
2:00	1:20	237.4	5.72	5.00	5.62	9.81	6.00	5.88	4.58	5.44
3:00	2:20	323.3	5.70	5.02	5.64	9.84	6.02	5.89	4.58	5.42
4:00	3:20	423.3	5.70	5.02	5.64	9.84	6.00	5.89	4.58	5.42
5:00	4:20	515.3	5.70	5.02	5.64	9.82	6.01	5.88	4.58	5.43
6:00	5:20	619.2	5.70	5.02	5.62	9.84	6.01	5.89	4.58	5.43
7:00	6:20	705.0	5.70	5.02	5.62	9.86	6.01	5.89	4.58	5.43
10:00	9:20	995.4	5.68	5.02	5.64	9.96	6.02	5.90	4.60	5.44
2:00	13:20	1138.5	5.67	5.01	5.63	10.05	6.03	5.91	4.60	5.48
7:00	18:20	1846.2	5.66	5.02	5.62	10.25	6.02	5.89	4.59	5.45
8:00	19:20	1926.2	5.66	5.01	5.63	10.19	6.02	5.90	4.59	5.44

PUMP TEST READINGS

Project: SAN PABLO SEWER PROJECT
Location: @ CAR WASH & ALBANY BOWL

Readings by: JOHN BOMAR

Date: 8-28-92
Pump Type:

Time	Elapsed Time Hr:Min	Water Meter Reading	Depth to Water in Well, Feet							
			Albany Bowl Property			Car Wash Property				
			MW-1	MW-2	MW-3	Pumphole	STMW-1	STMW-2	MW-2	MW-3
9:00	20:20	2016.2	5.64	5.00	5.61	9.90	6.00	5.88	4.58	5.44
10:00										
11:00										
12:00										
1:00										

INITIAL WELL DATA - PUMP TEST

Project: SAN PABLO SEWER PROJECT

Date: 8-27-92

By: JOHN BOMAR

Well No.	Before Test Depth to Water	Depth to Bottom of Casing	Elevation of Top of Casing	Remarks
Albany Bowl				
MW-1	5.70	19.30	101.54	
MW-2	5.00	19.00	99.92	
MW-3	5.59	19.00	100.87	
Car Wash				
Pump Hole	5.68	11.50		
STMW-1	5.90	13.90	100.62	
STMW-2	5.81	13.80	100.63	
MW-2	4.51	11.70	99.39	
MW-3	5.42	11.40	100.09	

P\653-02.M2

FREQ

57.0 GAL
82.2 GAL

FOR 10 MINS

31.8 GAL
88.0 GAL

3.6

FOR 1 MIN

August 27, 1992

135 - 120 - 1.8 GAL/MIN
2:15 - 125 - 1.9 GAL/MIN
3:40 - 172 - 1.7 GAL/MIN

ATTACHMENT B

References Cited

REFERENCES CITED

Aqua Terra Technologies, Inc. (ATT), 1992, *Final Tank Closure Report and Groundwater Monitoring Abandonment (Destruction) Request for the Property at 450 and 500 San Pablo Avenue, Albany, CA:* unpublished report for Mr. Ken Friedman, Albany Bowl Properties, October, 1992, 10 p. with appendices.

H^+GCL, Inc. (H^+GCL), 1993, *Closure Request for Groundwater Monitoring Wells MW-2 and MW-3, 450 San Pablo Avenue, Albany, California*, unpublished report for Mr. Ken Friedman, Albany Bowl Properties, May 12, 1993, 3 p with attachments.

H+GCL
Environmental Scientists and Engineers

2200 Powell Street, Ste. 880 • Emeryville, CA 94608
(510) 547-3886 • FAX: (510) 547-3631

May 14, 1993

Mr. Ken Friedman
Albany Bowl Properties
540 San Pablo Avenue
Albany, CA 94607

Re: Closure Request for Groundwater Monitoring Wells MW-2 and MW-3, 450 San Pablo Avenue, Albany, California

Dear Mr. Friedman:

At your request, H+GCL, Inc. (H+GCL) has prepared the following report for closure of groundwater monitoring wells MW-2 and MW-3 on the 450 San Pablo Avenue property in Albany, California.

Background

On August 30, 1990, Aqua Terra Technologies, Inc. (ATT), environmental/engineering consultants for Albany Bowl Properties, installed three groundwater monitoring wells on the 450 San Pablo Avenue property (herein referred to as the subject property). The groundwater monitoring wells were designated as MW-1 (located near and immediately downgradient from the former tank excavation) and MW-2 and MW-3 (located along the adjacent Plaza Car Wash property line). The installation of monitoring well MW-1 was as part of the final tank closure workplan approved by the Alameda County Health Care Service Agency (ACHCSA). The two additional downgradient monitoring wells MW-2 and MW-3 were installed, at the request of Albany Bowl Properties, to comply with a Phase I environmental site assessment (ESA) recommendation for the subject property. Monitoring wells MW-2 and MW-~~2~~ 3 were not installed as part of any regulatory agency requirement.

For monitoring well MW-1, ATT completed five quarterly sampling events, a semi-annual sampling event and a final tank and monitoring closure report (ATT, 1990, 1991a, 1992b, 1991c, 1992a, 1992b, 1992c, and 1992d). Monitoring wells MW-2 and MW-3 were used, in conjunction with monitoring well MW-1, to determine groundwater table depth, gradient and flow direction.

Although there was no regulatory agency requirement to sample and analyze groundwater from monitoring wells MW-2 and MW-3, Albany Bowl Properties allowed the adjacent Plaza Car Wash property consultant (Soil Tech Engineering or STE) to periodically sample and analyze groundwater from the monitoring well MW-3. This was done in an agreement

with a ACHCSA request that the Plaza Car Wash property's consultant be permitted to periodically sample and analyze groundwater from monitoring well MW-3 in conjunction within their investigation of the Plaza Car Wash gasoline spill. (Gasoline from this spill had impacted, and continues to impact, groundwater on the 450 San Pablo Avenue property.)

On January 7, 1993, the ACHCSA recommended to the San Francisco Bay Region of the Regional Water Quality Control Board (RWQCB) that the 450-500 San Pablo Avenue site be closed (Attachment A).

Groundwater Sample Analyses

Groundwater Monitoring Well MW-2

No total petroleum hydrocarbons (TPH) as gasoline and benzene, toluene, ethylbenzene and total xylenes (BTEX) have been detected in groundwater samples collected from monitoring well MW-2.

Groundwater Monitoring Well MW-3

Groundwater samples collected and analyzed from monitoring well MW-3 have had varying concentrations of TPH as gasoline and BTEX (Table 2, Attachment B). Just prior to the City of Albany's pumping test, a groundwater sample collected from monitoring well MW-3 (by Harlan Tate Associates on August 24, 1992) indicated that TPH as gasoline and BTEX concentrations were 0.180 mg/L, 0.045 mg/L, 0.0051 mg/L, 0.0048 mg/L, and 0.0061 mg/L, respectively. Just after the pumping test, a sample collected and analyzed by ATT on August 28, 1992 by ATT. This sample analysis showed that the withdrawal of gasoline contaminated groundwater (by pumping from the Plaza Car Wash property well) at the 450 San Pablo Avenue Property, substantially decreased the TPH as gasoline and BTEX concentrations to non-detectable concentrations.

Conclusions and Recommendations

Even though the City of Albany's August 27 and 28, 1992 pumping test was ineffective in capturing enough groundwater to prevent groundwater flow to the 450 San Pablo Avenue property during trenching, it did show that after pumping gasoline contaminated groundwater concentrations could be temporarily decreased below detectable levels (see H$^+$GCL May 12, 1993 letter report: *Pumping Test Investigation for the City of Albany Sewer Pipe Trench Excavation, 450 San Pablo Avenue, Albany, California*).

Groundwater monitoring wells MW-2 and MW-3 should be closed and destroyed by removal of the PVC well casing and gravel pack with subsequent grouting of the boring by neat Portland cement. These monitoring wells are not necessary for any current regulatory agency groundwater monitoring requirement for Albany Bowl Properties. Groundwater from monitoring well MW-2 is currently not sampled by the Plaza Car Wash property's consultant; for groundwater sampling, monitoring well MW-3 can be relocated on the Plaza Car Wash property.

References cited for this report are in Attachment D. If you have any questions or comments concerning this report, please call.

Sincerely,

H⁺GCL, Inc.

William E. Motzer, Ph.D., R.G.
Director Hydrogeology/Environmental Engineering Services

Attachments:
cc: Ms. Juliette Shin, ACHCSA
Mr. Thomas Donnelly, Heller, Ehrman, White & McAuliffe

H⁺GCL Environmental Scientists and Engineers

ATTACHMENT A

Alameda County Health Care Services Agency January 7, 1993
Closure Letter for the Albany Bowl Properties
450-500 San Pablo Avenue
Albany, California Property

H+GCL
Environmental Scientists and Engineers

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

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To Ken Freidman	From Juliet Shin
Co.	Co.
Dept.	Phone # 510-547-477
Fax # 415-332-4003	Fax # (570) 271-4530

January 7, 1993

Richard Hiett
RWQCB, S.F. Bay Region
21010 Webster St., Ste 500
Oakland, CA 94612

STID 1755

RE: Albany Bowl Properties, 450-500 San Pablo Avenue, Albany, California

RECOMMENDATION FOR UST CASE CLOSURE

Dear Mr. Hiett,

The responsible party for the above site retained Aqua Terra Technologies to prepare a Closure Request Report for the site. This closure report, along with some other pertinent reports and documents, are attached to this letter. In reviewing the files, this office is recommending this site for closure.

Investigations were conducted at the site in response to a petroleum product release observed in nearby Cerrito Creek. One 550-gallon gasoline underground storage tank (UST) and one 550-gallon waste oil UST were removed from the site in August 1990. The liquid contents of the tanks were compared with the water samples collected from Cerrito Creek. The results indicated that the samples from the tanks were distinctly different materials than the samples from Cerrito Creek, so no correlation could be made between the contamination in the creek and the site.

No holes were observed in the tanks. Three soil samples were collected from the eastern sidewall of the tank pit, and one ground water sample was collected from the pit. Analysis of soil samples identified up to 560 ppm TPHg and 660 ppm Oil and Grease. No benzene was detected in the soil samples. Further excavation was conducted, however, only to the extent of utility lines along the east and west walls of the tank pit. No confirmatory soil samples could be collected, apparently due to the utility lines. The ground water sample identified 2,200ppb TPHg and 26ppb benzene.

Three monitoring wells were installed at the site in August 1990. One well, MW-1, was installed approximately 30 feet downgradient of the former USTs, and the other two wells were installed further downgradient along the northern border of the site and

the neighboring car wash site. Both soil and ground water samples from these wells were analyzed for TOG, TPHg, BTEX, and Pb. Soil samples collected during the installation of these wells did not identify any contaminants. After the first ground water sampling effort, 140ppb TPHg and 26ppb benzene were identified from MW-3, and no contaminants were identified in Well MW-1 or MW-2.

In response to the results of the first ground water sampling effort, the site and the neighboring car wash came to the conclusion that the contaminants detected in MW-3 could be resulting from the car wash. They arrived at this conclusion because of the following:

- Downgradient Well MW-1, the well located closest to the former USTs, did not identify contaminants, but Well MW-3, located further downgradient and adjacent to the car wash, did detect contaminants.
- Investigations are being conducted at the neighboring car wash site, located at 400 San Pablo Avenue, due to both floating product and elevated concentrations of dissolved product identified in the ground water beneath the site.

The Albany Bowl site and the car wash made a tentative agreement that the car wash would continue to sample Wells MW-3 and MW-2, in order to define the upgradient extent of the ground water contaminant plume resulting from its site. The car wash is currently sampling these wells.

Therefore, the Albany Bowl site only continued to collect quarterly ground water samples from MW-1. Well MW-1 has been sampled for seven quarters now and no contaminants have been detected from this well, indicating that any soil contaminants that may remain near the utility lines surrounding the former USTs do not appear to be leaching out into the ground water.

Recently, questions arose as to whether or not the utility lines could be acting as a conduit for any ground water contaminants resulting from the former tanks on site. According to letters submitted by the consultants and the City's independent Construction Manager, the utility lines were not installed in any sort of trench. They were installed directly into native soil, so it is unlikely that these utility lines could be acting as conduits (Please refer to the attached letter from ATT

consultants, dated December 11, 1992 and a letter from Ken Freidman and the City Construction Mgr., dated January 4, 1992).

Considering the information available to this office, there does not appear to be any problems associated with any releases from the former USTs at this site. The ground water contaminants identified from Well MW-3 appear to be resulting from releases from the neighboring car wash site, located at 400 San Pablo Avenue. This office feels that the Albany Bowl site may be recommended for closure.

Please review all the attached information, and notify us of the RWQCB's decision as to whether it is in concurrence with this Department's decision.

Sincerely,

Juliet Shin
Hazardous Materials Specialist

cc: Edgar Howell-File(JS)

ATTACHMENT B

Tables

Table 1: Summary of Chemical Analyses
Groundwater Monitoring Well MW-2
Albany Bowl Properties
500 San Pablo Avenue
Albany, CA

Sample Date	TPH-G	B	T	E	X
09-17-90[a]	N.D.	N.D.	N.D.	N.D.	N.D.
08-24-92[b]	N.D.	N.D.	N.D.	N.D.	N.D.
08-24-92[c]	N.D.	N.D.	N.D.	N.D.	N.D.
08-28-92[d]	N.D.	N.D.	N.D.	N.D.	N.D.

Groundwater sample analyses reported in mg/L.
TPH-G = total petroleum hydrocarbons as gasoline; method detection limit = 0.050 mg/L.
N.D. = below method detection limit.
B = benzene, T = toluene, E = ethylbenzene. X = total xylenes; method detection limit = 0.005 mg/L.

a. Sample collected by Aqua Terra Technologies, Inc. (ATT); see ATT, 1992.
b. Sample collected by Aqua Terra Technologies, Inc. (ATT). DHS certified laboratory sheets in Attachment C.
c. Sample Collected by Harlan Tait Associates for the City of Albany. DHS certified laboratory sheets in Attachment C.

Table 2: Summary of Chemical Analyses
Groundwater Collected from Monitoring Well MW-3
Albany Bowl Properties
500 San Pablo Avenue
Albany, CA

Sample Date	TPH-G	B	T	E	X
09-17-90[a]	0.140	0.0260	0.0520	0.0020	0.0005
03-13-91[b]	0.120	0.0460	0.0120	0.0010	0.0040
07-03-91[b]	0.810	0.3200	0.0430	0.0160	0.0430
11-04-91[b]	0.970	0.1000	0.0190	0.0050	0.0130
01-20-92[b]	0.090	0.0007	0.0007	N.D.	0.0110
03-17-92[c]	0.090	0.0270	0.0022	0.0008	0.0012
05-07-92[b]	0.18	0.0270	0.0140	0.0082	0.0350
08-17-92[b]	0.087	0.0120	0.0098	0.0040	0.0420
08-24-92[d]	0.180	0.0450	0.0051	0.0048	0.0061
08-28-92[e]	N.D.	N.D.	N.D.	N.D.	N.D.
12-10-92[f]	0.540	0.0047	0.0045	0.0064	0.019

Groundwater sample analyses reported in mg/L.
TPH-G = total petroleum hydrocarbons as gasoline; method detection limit = 0.050 mg/L.
N.D. = below method detection limit.
B = benzene, T = toluene, E = ethylbenzene. X = total xylenes; method detection limit = 0.005 mg/L.

a. Sample collected by Aqua Terra Technologies, Inc. (ATT); see ATT (1992c).
b. Sample collected by Soil Tech Engineering, Inc. (STE) from Albany Bowl Properties' Monitoring Well MW-3 listed as OTMW-5 by STE in their quarterly groundwater monitoring reports (see STE, 1992).
c. Sample collected by ATT prior to City of Albany pumping test. Copies of DHS certified laboratory sheets in Attachment C.
d. Sample collected by Harlan Tait Associates for the City of Albany. Copies of DHS certified laboratory sheets in Attachment C.
e. Sample collected by ATT after conclusion of the City of Albany pumping test. Copies of DHS certified laboratory sheets in Attachment C.
f. Sample collected by STE from Albany Bowl Properties' Monitoring Well MW-3 listed as OTMW-5 by STE in their quarterly groundwater monitoring report (data via FAX to Mr. Ken Friedman from Mr. Murrey Stevens).

ATTACHMENT C

DHS Accredited Laboratory Analytical Data Sheets
Chain of Custody Records

H+GCL
Environmental Scientists and Engineers

CHROMALAB, INC.

Analytical Laboratory (E694)

5 DAYS TURNAROUND

March 25, 1992 ChromaLab File No.: 0392171

AQUA TERRA TECHNOLOGIES

Attn: Bill Motzer

RE: One water sample for Gas/BTEX analysis

Project Number: 9064
Date Sampled: Mar. 17, 1992 Date Submitted: Mar. 17, 1992
Date Extracted: Mar. 18, 1992 Date Analyzed: Mar. 18, 1992

RESULTS:

Sample I.D.	Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)
MW-3	90	27	2.2.	0.8	1.2
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	107%	93%	98%	93%	96%
DETECTION LIMIT	50	0.5	0.5	0.5	0.5
METHOD OF ANALYSIS	5030/8015	602	602	602	602

ChromaLab, Inc.

Ronald Halsne
Analytical Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

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)

ATT

Page 1 of 1

Sampled By: DAVID BEARDSLEY

Date Sampled: 3-17-92

Signature:

ATT Job #: 9064

Lab Name: CHROMALAB

Results To Be Sent To: BILL METZER

Contact:

Results Needed By: 5 DAY STANDARD TURNAROUND

Phone #: 831-1788

Fax Results ASAP ☐

Lab Job #:

Sample Collection				Sample Preservation			Sample Containers				Analysis/EPA Method No.							
Sample I.D.	Time (24 hr)	Matrix (e.g. Water, Soil)	Number of Containers	Ice	HCL	Dry Ice	40 ML VOA				BTEX	TPH G						Remarks
MW3	10:55	WATER	3	✓	✓		3				✓	✓						

Notes:

CHROMALAB FILE # 392171
ORDER # 5801

Relinquished by/ Company Affiliation	Date	Time	Received by: Company Affiliation	Date	Time
	3-17-92	1645		3/17/92	1645

HTA **Harlan Tait Associates**

FAX TRANSMITTAL

Consulting Engineers and Geologists

To: Jason Baker From: Dave Connell

Firm: City of Albany Date: 8-27-92 Time: _____

FAX: 1-510-524-9359 No. of pages including cover: 3

RE: San Pablo Ave Sewer Project PROJ NO. 653.07
Analytical test Results

Attached:
- Results of analytical tests on water samples from jacking pit and wells MW-2 and MW-3 on Albany Bowl Property

Notes:

Copy to:
- SoilTech Engr. Inc Frank Homedi-Ford Fax 408-988-3343
- → Agra Tera Techn., Bill Motzer Fax 510-934-0418
- _____ Fax _____
- _____ Fax _____
- _____ Fax _____

Mail hard copies: Yes / No

Harlan Tait Associates ▪ 1269 Howard Street ▪ San Francisco, CA 94103-2787 ▪ 415/626-0765 ▪ Fax 415/255-2431

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55428
CLIENT: HARLAN TAIT ASSCIATES
CLIENT JOB NO.: 653.07

DATE RECEIVED: 08/24/92
DATE REPORTED: 08/27/92

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
by Modified EPA SW-846 Method 5030 and 8015

LAB #	Sample Identification	Concentration (ug/L) Gasoline Range
1	PIT-1	ND<50
2	MW-2	ND<50
3	MW-3	180

ug/L - parts per billion (ppb)

Method Detection Limit for Gasoline in Water: 50 ug/L

QAQC Summary:

Daily Standard run at 2mg/L: %Diff Gasoline = <15
MS/MSD Average Recovery = 94%: Duplicate RPD = 3%

Richard Srna, Ph.D.
for
Laboratory Manager

8/27/92

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647 2081 / fax (415) 821 7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 55428
CLIENT: HARLAN TAIT ASSCIATES
CLIENT JOB NO.: 653.07

DATE RECEIVED: 08/24/92
DATE REPORTED: 08/27/92

ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

LAB #	Sample Identification	Concentration(ug/L) Benzene	Toluene	Ethyl Benzene	Xylenes
1	PIT-1	ND<0.3	ND<0.3	ND<0.3	ND<0.3
2	MW-2	ND<0.3	ND<0.3	ND<0.3	ND<0.3
3	MW-3	45	5.1	4.8	6.1

ug/L - parts per billion (ppb)

Method Detection Limit in Water: 0.3 ug/L

QAQC Summary:

Daily Standard run at 20ug/L: %Diff 8020 = <15%
MS/MSD Average Recovery = 95%: Duplicate RPD = 2%

Richard Srna, Ph.D
Laboratory Manager

8/27/92

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

September 8, 1992 ChromaLab File No.: 0892286

AQUA TERRA TECHNOLOGIES, INC.

Attn: Bill Motzer / B. Berman

RE: Two water samples for Gas/BTEX analyses.

Project Number: 929384
Date Sampled: Aug. 28, 1992 Date Submitted: Aug. 31, 1992
Date Analyzed: Sept. 3, 1992

RESULTS:

Sample I.D.	Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)
MW2	N.D.	N.D.	N.D.	N.D.	N.D.
MW3	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
SPIKE RECOVERY	103%	94%	100%	99%	99%
DUP SPIKE RECOVERY	----	96%	100%	101%	101%
DETECTION LIMIT	50	0.5	0.5	0.5	0.5
METHOD OF ANALYSIS	5030/ 8015	602	602	602	602

ChromaLab, Inc.

Billy Thach
Analytical Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

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

CHROMALAB FILE # 892286

CHAIN OF S ORDER # 7618

(original [illegible])

ATT

Page 1 of 1

Sampled By: Benjamin Berman

Date Sampled: 8-28-92

Signature: B. Ber

ATT Job #: 929384

Lab Name: Chromalab

Results To Be Sent To: Bill Motzer/B. Berman

Contact: Gary Cook

Results Needed By: standard turnaround

Phone #: 831-1788

Fax Results ASAP ☐

Lab Job #:

Sample Collection				Sample Preservation				Sample Containers				Analysis/EPA Method No.						
Sample I.D.	Time (24 hr)	Matrix (e.g. Water, Soil)	Number of Containers	Ice	HCL	Dry Ice		40ml. VOA				TPH-Gas	BTEX					Remarks
MW2	13:45	Water	2	✓				✓				✓	✓					
MW3	14:40	"	2	✓				✓				✓	✓					

Notes:

Relinquished by/ Company Affiliation	Date	Time	Received by: Company Affiliation	Date	Time
B. Ber	8.31.92	12:55			
			[signature]	8-31-92	12.57

ATTACHMENT D

References Cited

REFERENCES CITED

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

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Aqua Terra Technologies, Inc. (ATT), 1991b, *Third Quarter Groundwater Sample Analysis for Monitoring Well MW-1, 450 - 500 San Pablo Avenue, Albany, CA*: unpublished July 12, 1991 ATT report, 5 p. with attachments.

Aqua Terra Technologies, Inc. (ATT), 1991c, *Fourth Quarter Groundwater Sample Analysis for Monitoring Well MW-1, 450 - 500 San Pablo Avenue, Albany, CA*: unpublished September 26, 1991 ATT report, 2 p. with attachments.

Aqua Terra Technologies, Inc. (ATT), 1992a, *Fifth Quarter Groundwater Sample Analysis for Monitoring Well MW-1, 450 - 500 San Pablo Avenue, Albany, CA*: unpublished February 23, 1992 ATT report, 2 p. with attachments.

Aqua Terra Technologies, Inc. (ATT), 1992b, *First Semi-Annual Groundwater Sample Analyses and Well Closure Recommendation for Groundwater Monitoring Well MW-1, 450 - 500 San Pablo Avenue, Albany, CA*: unpublished May 5, 1992 ATT report, 4 p. with attachments.

Aqua Terra Technologies, Inc. (ATT), 1992c, *Final Tank Closure Report and Groundwater Monitoring Well Abandonment (Destruction) Request for the Property at 450 and 500 San Pablo Avenue, Albany, CA*: unpublished ATT report, 10 p. with attachments.

H$^+$GCL, Inc. (H$^+$GCL), 1993, *Pumping Test Investigation for the City of Albany Sewer Pipe Trench Excavation, 450 San Pablo Avenue, Albany, California*: unpublished letter report to Mr. Ken Friedman, 3 p. with attachments.

Soil Tech Engineering (STE), 1992, *Quarterly Groundwater Monitoring and Sampling at the Plaza Car Wash, Located at 400 San Pablo Avenue, Albany, California*: unpublished STE report, 15 p. with attachments.