



January 18, 2000

STID 6613

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9432

REMEDIAL ACTION COMPLETION CERTIFICATION

Archstone Communities
22320 Foothill Blvd., Ste. 200
Hayward, CA 94541
Attn: Shyam Taggars

RE: Archstone Communities, 5054 Havens Place, Dublin

Dear Mr. Taggars:

This letter confirms the completion of a site investigation and remedial action for the underground storage tank formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721(e) of Title 23 of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung
Director, Environmental Health Services

c: Chuck Headlee, RWQCB
Dave Deaner, SWRCB (w/attachment)

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

January 18, 2000

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
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STID 6613

Archstone Communities
22320 Foothill Blvd., Ste. 220
Hayward, CA 94541
Attn: Shyam Taggars

RE: Archstone Communities, 5054 Havens Place, Dublin

Dear Mr. Taggars:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]) of the California Health and Safety Code. The State Water Resources Control Board (SWRCB) has required since March 1, 1997 that this agency use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at this site.

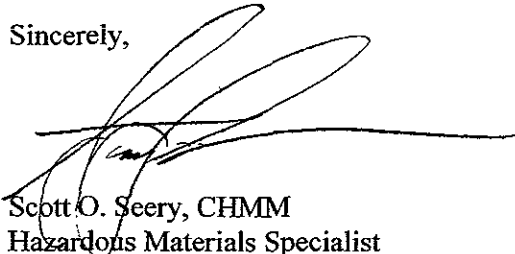
SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- o Up to 58,000 micrograms per liter (ug/l) Total Petroleum Hydrocarbons as Diesel (TPH-D) and 0.92 ug/l Benzene, among other fuel compounds detected, are present in groundwater beneath the site.

If you have any questions, please contact the undersigned at (510) 567-6783.

Sincerely,



Scott O. Seery, CHMM
Hazardous Materials Specialist

Enclosures:

1. Case Closure Letter
2. Case Closure Summary

cc: Ariu Levi, Chief

SIGNED
COPY-

RB# 01-2456

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 12/13/99

Agency name: **Alameda County-EPD**
City/State/Zip: **Alameda, CA 94502**
Responsible staff person: **Scott Seery**

Address: **1131 Harbor Bay Pkwy #250**
Phone: **(510) 567-6700**
Title: **Haz. Materials Spec.**

II. CASE INFORMATION

Site facility name: **Archstone Communities**
Site facility address: **5054 Havens Place, Dublin 94568**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **6613**
URF filing date: **10/16/98** SWEEPS No: **N/A**

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Archstone Communities Trust, a Maryland Real Estate Investment Trust. Attn: Shyam Taggars	22320 Foothill Blvd., Ste. 220 Hayward, CA 94541	(510) 583-2100

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	~350	gasoline (?)	removed	08/04/98

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: tank breach during excavation of site

Site characterization complete? YES

Date approved by oversight agency:

Monitoring Wells installed? NO Number: NA

Proper screened interval? NA

Highest GW depth below ground surface: ~14' BG Lowest depth: ~14' BG

Flow direction: ~ southeast

Most sensitive current use: high-density residential

Are drinking water wells affected? NO Aquifer name: Camp Subbasin

Is surface water affected? NO Nearest affected SW name: NA

Off-site beneficial use impacts (addresses/locations):

Handwritten notes:
CINCY REVIEW...
APR 20 1999
BOSTON UNIVERSITY...

55-018-01-0000
810
7500

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Report(s) on file? **YES** Where is report filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda CA 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	~ 350 gals.	<u>Disposal</u> – ECI Richmond, CA	08/04/98
Piping	NA		
Soil	~ 57 tons	<u>Disposal</u> – Altamont LF Livermore, CA	08/20/98
Water/HC	~ 1100 gals.	<u>Disposal</u> – ISOCI Los Angeles, CA	08/04/98 + 08/21/98

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm) ¹		Water (ppb) ^{2,3}	
	Before	After	Before	After
TPH (Gas)	NA	NA	NA	7500
TPH (Diesel)	960	420	11,000,000	58,000
Benzene	ND	ND	11	0.92
Toluene	0.024	0.029	9.5	ND
Xylene	0.6	0.39	71	52
Ethylbenzene	ND	0.018	2.1	0.9
Other MtBE	NA	NA	NA	ND

- Note:
- 1) "Before" soil results stem from a single sample collected at the base of the UST excavation at a depth of 10' following tank removal. "After" soil results are from a sidewall sample collected at the 14' depth following limited pit over excavation.
 - 2) "Before" water results are from the sample collected from the UST pit following limited pit over excavation.
 - 3) "After" water results are a compilation of sample results from a series of "Geoprobe" borings emplaced about the former UST location.

Comments (Depth of Remediation, etc.):

A single, long-abandoned UST was discovered during preliminary excavation activities associated with the development of a small high-density residential project (Archstone Communities) on former surplus Alameda County land. This tank appears to have been a remnant from the former military activities in the greater Camp Parks area, of which this redevelopment site was a portion.

Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Some ~30 gallons of old product was reportedly pumped from the tank after it was struck and breached by an excavator. The tank was removed in two pieces and transported to ECI (Richmond, CA) for decommissioning. A single soil sample was collected from the base of the excavation at a depth of 10' BG. Resultant analytical data were surprisingly unremarkable. Nevertheless, the excavation was extended vertically to 15' BG where groundwater was encountered. Both a sidewall sample (14' BG) and water sample were collected from the final excavation. Up to 11,000,000 ug/l TPH-D and 11 ug/l benzene were discovered in sampled water, while 420 ppm TPH-D and trace aromatics were identified in soil.

The excavation was reportedly restored with on-site, unimpacted soil in order to complete the project (after clearance from this office). The stockpile of impacted soil (~ 57 tons) was transported to Altamont landfill (Livermore, CA). In addition, the UST pit was pumped on at least two occasions, with ~ 1100 gallons being transported to Industrial Services Oil Company, Inc. (L.A., CA) for disposal.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES

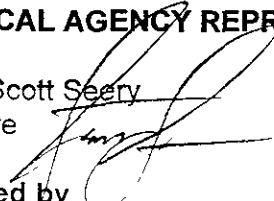
Monitoring wells Decommissioned: NA


Number Decommissioned: NA Number Retained: NA

List enforcement actions taken: NONE

List enforcement actions rescinded: NONE


V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Scott Seery Title: Haz Mat Specialist
Signature:  Date: 01/03/00

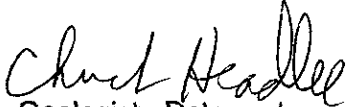
Reviewed by
Name: Tom Peacock Title: Supervising Haz Mat Specialist
Signature:  Date: 1-3-2000

Leaking Underground Fuel Storage Tank Program

V. LOCAL AGENCY REPRESENTATIVE DATA (Continued)

Name: Eva Chu Title: Haz Mat Specialist
Signature:  Date: 12/14/99

VI. RWQCB NOTIFICATION

Date Submitted to RB: 1-3-00 RB Response: 
RWQCB Staff Name: Chuck Headlee Title: Assoc. Eng. Geologist Date: 1/10/00

VII. ADDITIONAL COMMENTS, DATA, ETC.

In October 1998 additional investigative work commenced at the site. An underground survey was conducted initially in an attempt to discover whether or not additional tanks might be present at the site. This survey, conducted by a third party contractor using a battery of techniques (e.g., EMI, magnetometer, etc.), failed to identify any other buried anomalies consistent with a buried tank.

Several "Geoprobe-type" borings were advanced about the former UST location in order to collect soil and groundwater samples, and determine GW flow characteristics. A total of 7 such borings were completed. Each boring was continuously cored. Temporary piezometers consisting of 1" diameter PVC screen and casing were placed in borings B5 - B8. The top-of-casing elevations of each were surveyed to facilitate GW elevation determinations. GW was shown to flow towards the southeast in the area of the former UST with a very shallow gradient.

Up to 130 ppm TPH-D, 11 ppm TPH-G, and trace xylenes were identified in soil samples from depths of between 7 and 16' BG. Groundwater exhibited up to 58,000 ug/l TPH-D, 7700 ug/l TPH-G, and trace BEX. MtBE was not detected.

The site has since been developed into a high-density residential complex. The complex is built over a parking garage that is concrete floored and partially completed below surface grade. The parking structure is open on all sides such that the inherent design facilitates substantial ambient air exchange.

This case should be closed as it meets the definition of a "Low Risk Groundwater Case", as outlined in the 05 January 1996 guidance from the San Francisco Bay Regional Water Quality Control entitled "Regional Board Supplemental Instructions to State Water Board December 8, 1995, Interim Guidance on Required Cleanup at Low-Risk Sites", as follows:

- 1) The leak has been stopped and ongoing sources, including free product, have been removed or remediated.

The subject UST, as well as residual product, was removed from the site in 1998. Some 1100 gallons of HC-impacted groundwater was also pumped from the excavation. Hence, no ongoing HC source remains at the site.

Leaking Underground Fuel Storage Tank Program

2) The site has been adequately characterized.

Over the course of the 1998 investigation and remediation of this site, 7 soil borings/sampling points were installed around the former UST location. From each, soil and GW samples were collected and analyzed. Contaminant distribution was adequately defined by this work to render risk-based decisions with respect to approving redevelopment plans for the site, and determining if further assessment or remediation work was warranted. With concurrence from the RWQCB, no further work appeared necessary.

3) The dissolved hydrocarbon plume is not migrating.

Data generated during the 1998 investigation appear to demonstrate that contaminants are severely limited to the area immediately adjacent the former UST location.

4) No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.

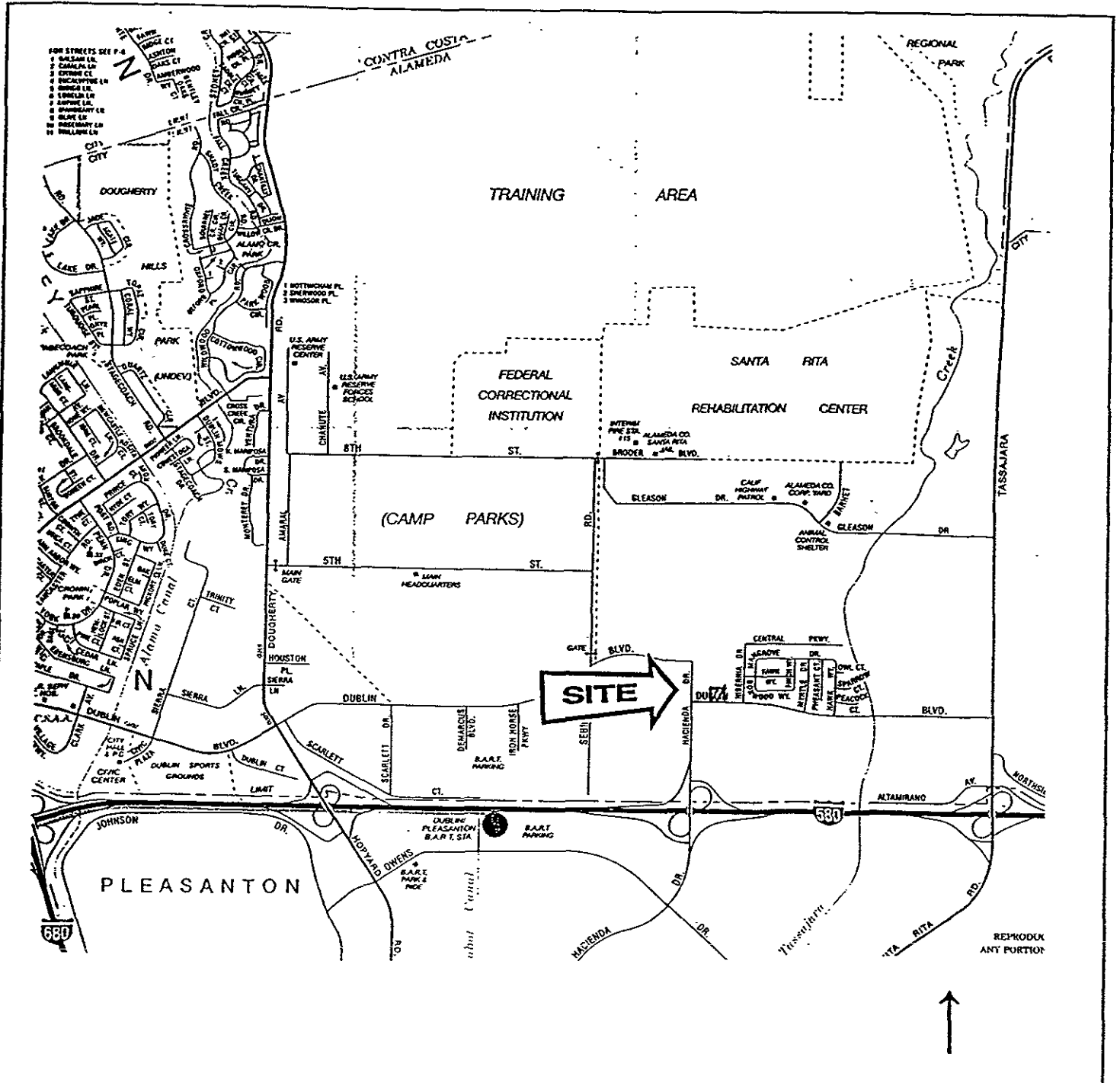
There are no known drinking water wells or aquifers, or surface water in the vicinity of the site. It is anticipated that only very shallow, nonpotable groundwater has been impacted by this release.

5) The site presents no significant risk to human health.

Fuel concentrations and site conditions were compared to ASTM E1739-95 guidance and Tier 1 RBSL values. This review revealed that no plausible exposure pathways were anticipated to be complete. Therefore, no significant health risk is anticipated for on-site residential receptors, the most-sensitive potential receptor population considered.

6) The site presents no significant risk to the environment.

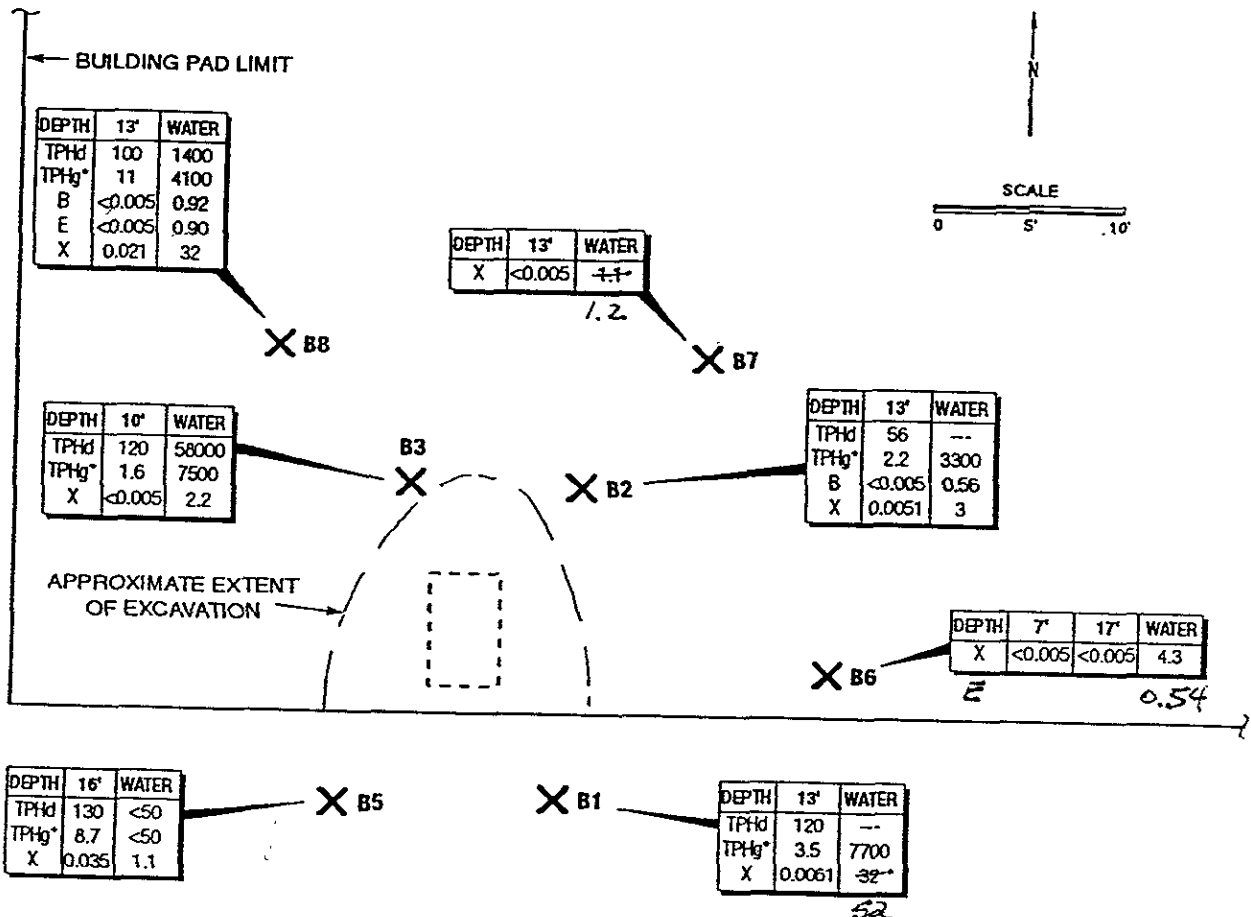
No potential risk was identified due to the geographic separation of the site from any potential receptor locations (e.g., Tassajara Creek).



REFERENCE: CALIFORNIA STATE AUTOMOBILE ASSOCIATION MAP
 SAN RAMON VALLEY
 SEPTEMBER 1997.

SCALE 1" = 2,200 feet

DRAFTED BY CP	CHECKED BY. CP	Project No. F0803-041-01	Figure 1	SECOR 1225 Pear Avenue Suite 110 Mountain View, CA 94043
PREP. DATE: 10/04/98	REV. DATE.	ARCHSTONE-HAVENS PLACE On Dublin Boulevard Between Hacienda and Hibernia Dublin, CA	Site Location Map	
FILE NAME: ARCHSTONE				



HYDROCARBON DATA		
DEPTH	13'	WATER
TPHd	100	120.5
TPHg*	---	NA
B	---	---
E	---	---
X	---	---

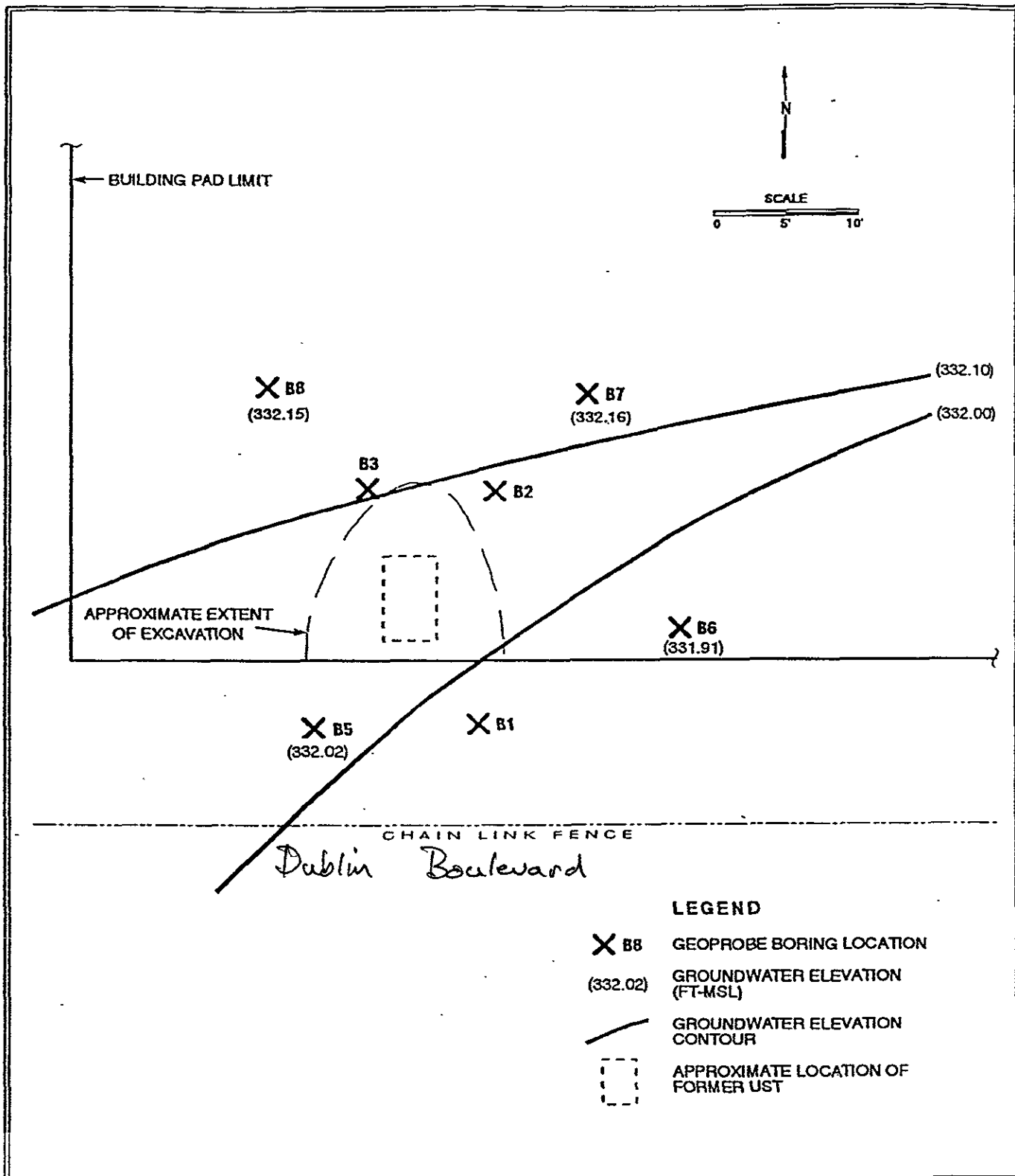
- TPHd = DIESEL RANGE HYDROCARBONS
- TPHg* = GASOLINE RANGE HYDROCARBONS (SEE * BELOW)
- B = BENZENE
- E = ETHYLBENZENE
- X = XYLENE
- NA = NOT ANALYZED
- --- = DATA NOT COLLECTED

SOIL RESULTS IN mg/kg, WATER RESULTS IN µg/L

- LEGEND**
- X B8** GEOPROBE BORING LOCATION
 - APPROXIMATE LOCATION OF FORMER UST

* Note: Gasoline results were within quantitative range; however, the chromatographic pattern was not typical of gasoline

DRAFTED BY: PEM	CHECKED BY: MB	PROJECT NUMBER: F0803-041-01	FIGURE NUMBER: 2	SECOR 1225 Pezr Avenue Suite 110 Mountain View, CA 94043
DWG DATE: 11/3/98	REV. DATE: 11/23/98	CLIENT: ARCHSTONE COMMUNITIES	TITLE: SITE PLAN WITH COMPOUNDS DETECTED IN SOIL AND GROUNDWATER SAMPLES 5054 HAVENS PLACE DUBLIN, CA	
FILE NAME: ScrARC5054DublnSt2				



LEGEND

- X B8 GEOPROBE BORING LOCATION
- (332.02) GROUNDWATER ELEVATION (FT-MSL)
- GROUNDWATER ELEVATION CONTOUR
- - - - APPROXIMATE LOCATION OF FORMER UST

DRAFTED BY: PEM	CHECKED BY: MB	PROJECT NUMBER: F0803-041-01	FIGURE NUMBER: 3	SECOR 1225 Pear Avenue Suite 110 Mountain View, CA 94043
DWG DATE: 11/3/98	REV. DATE:	CLIENT: ARCHSTONE COMMUNITIES	TITLE: GROUNDWATER ELEVATION CONTOUR MAP 5054 HAVENS PLACE DUBLIN, CA	
FILE NAME: ScrARC5054DublnSt3				

Table 1. Summary of Groundwater Sample Analytical Results
5054 Havens Place, Dublin, California

Sample ID	Sample Date	TPH-d ^a ($\mu\text{g/L}$)	TPH-g ^b ($\mu\text{g/L}$)	MTBE ^c ($\mu\text{g/L}$)	Dissolved Lead ^d (mg/L)	BTEX ^e ($\mu\text{g/L}$)			
						Benzene	Toluene	Ethylbenzene	Xylenes
B-1	10-30-98	no sample	7,700 ^x	<100	<0.015	<10	<10	<10	52
B-2	10-30-98	no sample	3,300 ^x	<5.0	no sample	0.56	<0.50	<0.50	3
B-3	10-28-98	58,000	7,500 ^x	<5.0	<0.015	<0.50	<0.50	<0.50	2.2
B-5	10-28-98	<50	<50	<5.0	<0.015	<0.50	<0.50	<0.50	1.1
B-6	10-28 & 30-98	<50	<50	<5.0	<0.015	<0.50	<0.50	0.54	4.3
B-7	10-28-98	<50	<50	<5.0	<0.015	<0.50	<0.50	<0.50	1.2
B-8	10-28-98	1,400	4,100 ^x	<5.0	<0.015	0.92	<0.50	0.90	32

- a Total diesel-range petroleum hydrocarbons, by EPA Method 8015 Modified, reported as micrograms per liter ($\mu\text{g/L}$).
- b Total gasoline-range petroleum hydrocarbons, by EPA Method 8015 Modified.
- c Methyl tertiary-butyl ether, by EPA Method 8020.
- d Dissolved lead (i.e., sample was filtered by the laboratory and the filtrate analyzed), by EPA Method 6010, reported as milligrams per liter (mg/L).
- e BTEX (benzene, toluene, ethylbenzene and xylenes), by EPA Method 8020.
- x Results within quantitation range; chromatographic pattern not typical of gasoline.

Table 2. Summary of Soil Sample Analytical Results
5054 Havens Place, Dublin, California

Sample ID	Sample Date	Sample Depth (feet)	TPH-d ^a (mg/Kg)	TPH-g ^b (mg/Kg)	BTEX (mg/Kg)			
					Benzene	Toluene	Ethylbenzene	Xylenes
B1-16	10-28-98	16	120	3.5 ^a	<0.005	<0.005	<0.005	0.0061
B2-13	10-28-98	13	56	2.2 ^a	<0.005	<0.005	<0.005	0.0051
B3-10	10-28-98	10	120	1.6 ^a	<0.005	<0.005	<0.005	<0.005
B5-16	10-28-98	16	130	8.7 ^a	<0.005	<0.005	<0.005	0.035
B6-7	10-28-98	7	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005
B6-17	10-28-98	16	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005
B7-13	10-28-98	13	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005
B8-13	10-28-98	13	100	11 ^a	<0.005	<0.005	<0.005	0.021

- a Total diesel-range petroleum hydrocarbons, by EPA Method 8015 Modified, reported as milligrams per kilogram (mg/kg).
b Total gasoline range petroleum hydrocarbons, by EPA Method 8015 Modified.
c BTEX (benzene, toluene, ethylbenzene and xylenes), by EPA Method 8020.
x Results within quantitation range; chromatographic pattern not typical of gasoline.

Table 3. Initial UST Closure and Over-Excavation Sample Results

Initial results

Sample	TPH-G	TPH-D	Benzene	Toluene	E. Benz.	Xylenes
T-1	-----	960	<0.5	0.024	<0.5	0.60
SP-1	-----	820	<0.5	0.028	<0.5	0.15

T-1 Tank pit bottom

SP-1 Stockpile

Over-excavation and Pit Water Sample

Sample	TPH-G	TPH-D	Benzene	Toluene	E. Benz.	Xylenes
GW-1	-----	11,000,000	11	9.5	2.1	71
SW-1	-----	420	<0.5	0.029	0.018	0.39

GW-1 Pit water

SW-1 Sidewall sample

All results are expressed in mg/kg (ppm) for *soil*, and ug/l (ppb) for *water*

Project: ARCHSTONE	Project No.: F0803-041-01	Log of Boring/Monitoring Well: B1
Boring Location: DUBLIN, CALIFORNIA	DEC 28 1998	
Subcontractor and Equipment: PRECISION GEOPROBE	Logged By: S.R.S. Drawn By: C.R.	Comments:
Sampling Method: CONTINUOUS	Monitoring Device: PID	
Start Date/Time: 10/28/98//1105	Finish Date/Time: 10/30/98	
First Water (bgs): NA	Stabilized Water Level (bgs): 10/30/98	

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
						LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		0						
		1						
		2						
		3						
	16.3	4						Backfilled with Grout
		5						
B1-7	16.9	7						
		8						
		9						
B1-10	13.9	10						
		11						
		12						
B1-13	33.2	13						
		14						
		15						
B1-16	64.0	16						
		17						
		18						
	22.2	19						
		20						

199807 2919 49 X:\LOGS\ARCHSTONE\B1

SECOR

Reviewed By SETH STILES, R.G. Date 12/7/98
 Revised By _____ Date _____

Project: ARCHSTONE		Log of Boring/Monitoring Well:	
Boring Location: DUBLIN, CALIFORNIA		Project No.: F0803-041-01	
Subcontractor and Equipment: PRECISION GEOPROBE		Logged By: S.R.S. Drawn By: C.R.	
Sampling Method: CONTINUOUS		Monitoring Device: PID	
Start Date/Time: 10/28/98//1322		Finish Date/Time: 10/30/98	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

B2

Comments:

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
						LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		0						
		1						
		2						
		3						
		4						
	2.6	4						
		5						
		6						
		7						
	22.2	7						
		8						
		9						
B2-10	40.8	10						
		11						
		12						
B2-13	208.7	13						
		14						
		15						
B2-16	2.9	16						
		17						
		18						
	3.0	19						
		20						

Backfilled with Grout

199807 291949 X:\LOCAL\ARCHSTONE\B2

Project: ARCHSTONE
 Boring Location: DUBLIN, CALIFORNIA
 Subcontractor and Equipment: PRECISION GEOPROBE
 Sampling Method: CONTINUOUS
 Start Date/Time: 10/28/98//1358
 First Water (bgs): NA

Project No.: F0803-041-01
 Logged By: S.R.S. Drawn By: C.R.

Log of Boring/Monitoring Well:

B3

Comments:

Surface Elevation: NA Casing Top Elevation: NA

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
		0					
		1				DARK GRAYISH BROWN (10YR 4/2) SANDY CLAY (CL) stiff, dry (5,40,10,45)	
		2					
		3				BROWN (7.5YR 5/4) FINE SAND (SW) dense, dry,	
	2.2	4				BROWN (7.5YR 5/4) FINE SAND (SW) dense, dry, (5,65,15,15)	
		5					
		6					
	2.7	7					
		8				LIGHT OLIVE BROWN (2.5Y 5/3) SANDY CLAY (CL) stiff, dry	
		9					
B3-10	49.1	10					
		11					
		12					
B3-13	15.0	13					
		14				BLUISH GREEN (no corresponding munsel color chip) FINE SILTY SAND (SM) medium dense, moist	
		15					
B3-16	2.6	16				Becomes Brown (2.5Y 5/3)	
		17					
		18					
	2.6	19					
		20					

Backfilled with Grout

199807 291949 X:\005\ARCHSTONE\B3

SECOR

Reviewed By: SETH STILES, R.G. Date: 12/7/98
 Rensed By: _____ Date: _____

Project: ARCHSTONE		Log of Boring/Monitoring Well:	
Boring Location: DUBLIN, CALIFORNIA		Project No.: F0803-041-01	
Subcontractor and Equipment: PRECISION GEOPROBE		Logged By: S.R.S.	Drawn By: C.R.
Sampling Method: CONTINUOUS		Monitoring Device: PID	
Start Date/Time: 10/28/98//1155		Finish Date/Time: 10/30/98	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

B5

Comments:

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
						LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		0						
		1						
		2						
		3						
	183	4						Backfilled with Grout
B5-7	17.5	7				DARK GRAYISH BROWN (10YR 4/2) SANDY CLAY (CL) stiff, dry (0,35,20,45)		
		8						
		9						
B5-10	21.4	10						
		11						
		12						
B5-13	215.4	13						
		14						
		15						
B5-16	228	16						
		17					odor	
		18					Becomes wet, soft	
		19					no odor	
	9.4	19						
		20						

199807 291949 X \LOGS\ARCHSTONE\B5

Project: ARCHSTONE		Log of Boring/Monitoring Well:	
Boring Location: DUBLIN, CALIFORNIA		Project No.: F0803-041-01	
Subcontractor and Equipment: PRECISION GEOPROBE		Logged By: S.R.S.	Drawn By: C.R.
Sampling Method: CONTINUOUS		Monitoring Device: PID	
Start Date/Time: 10/28/98//1024		Finish Date/Time: 10/30/98	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

B6

Comments:

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
						LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		0						
		1						
		2						
		3						
	23	4						Backfilled with Grout
		5						
B6-7	26	7						
		8						
		9						
B6-10	22.9	10						
		11						
		12						
	13.3	13						
		14						
		15						
	7.8	16						
B6-17		17						
		18						
	11.7	19						
		20						

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Project: ARCHSTONE		Log of Boring/Monitoring Well:	
Boring Location: DUBLIN, CALIFORNIA		Project No.: F0803-041-01	
Subcontractor and Equipment: PRECISION GEOPROBE		Logged By: S.R.S.	Drawn By: C.R.
Sampling Method: CONTINUOUS		Monitoring Device: PID	
Start Date/Time: 10/28/98//0930		Finish Date/Time: 10/30/98	
First Water (bgs): NA		Stabilized Water Level (bgs): NA	

B7

Comments:

Sample Number	PID (ppm)	Depth (feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA	Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
						LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)		
		0						
		1						
		2						
		3						
	23.8	4						
		5						
B7-7	24.2	7						
		8						
		9						
B7-10	25.2	10						
		11						
		12						
	27.8	13						
		14						
		15						
B7-16	26.5	16						
		17						
		18						
B7-19	22.0	19						
		20						

Backfilled with Grout

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SECOR

Reviewed By SETH STILES, R.G. Date 12/7/98
 Revised By _____ Date _____

Project: ARCHSTONE		Log of Boring/Monitoring Well: B8
Boring Location: DUBLIN, CALIFORNIA	Project No.: F0803-041-01	
Subcontractor and Equipment: PRECISION GEOPROBE	Logged By: S.R.S. Drawn By: C.R.	Comments:
Sampling Method: CONTINUOUS	Monitoring Device: PID	
Start Date/Time: 10/28/98//0845	Finish Date/Time: 10/30/98	
First Water (bgs): NA	Stabilized Water Level (bgs): NA	

Sample Number	PID (ppm)	Depth (feet)	Recovery	USCS Symbol	Water Level	Surface Elevation: NA Casing Top Elevation: NA	Boring Abandonment/ Well Construction Details
						LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	
		0					
		1					
		2					
		3					
	8.8	4					Backfilled with Grout
		5					
B8-7	12.7	7				BROWN/DARK BROWN (10YR 4/3) SANDY CLAY (CL) (0,25,20,55) stiff, dry	
		8					
		9					
B8-10	112	10					
		11				PALE BROWN (10YR 1/3) SILTY SAND (SM) medium dense, dry	
		12				diesel odor	
B8-13	170	13				becomes wet	
		14					
		15				BROWN (10YR 5/3) FINE SAND (SW) dense, wet (0,90,5,5) no odor	
		16					
		17					
		18					
		19					
		20					

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