ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

Alameda County CC4580
Environmental Health Services
1131 Harbor Bay Pkwy., #250
Alameda CA 94502-6577
(510)567-6700 FAX(510)337-9335

REMEDIAL ACTION COMPLETION CERTIFICATION

May 31, 1996

Ballena Isle Marina
1150 Ballena Blvd., #111
Alameda, CA 94501
ATTN: Don Anderson

UNDERGROUND STORAGE TANK (UST) CASE
Re: 1150 Ballena Blvd., Alameda, California 94501
Site No. 3822

Dear Mr. Anderson,

This letter confirms the completion of site investigation and remedial action for the 250-gallon waste oil underground storage tank formerly located at the above described location, and the 12,000-gallon gasoline and 12,000-gallon diesel USTs currently located at the site. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including the current land use, 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 storage tank release is required.

This notice is issued pursuant to a regulation contained in Title 23, California Code of Regulations, Division 3, Chapter 16, Section 2721(e).

Please telephone Juliet Shin at (510) 567-6700 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director

c: Acting Chief, Hazardous Materials Division - files
Juliet Shin, ACDEH
Kevin Graves, RWQCB
Lori Casias, SWRCB

01-0147

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION Date: 1/18/96

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy.
City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700
Responsible staff person: Juliet Shin Title: Senior HMS

II. CASE INFORMATION

Site facility name: Ballena Isle Marina
Site facility address: 1150 Ballena Blvd., Alameda, CA 94501
RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 3822
URF filing date: 1/18/90 SWEEPS No: N/A

Responsible Parties:	Addresses:	Phone Numbers:
Don Anderson Almar Ltd.	Ballena Isle Marina 1150 Ballena Blvd., #111 Alameda, CA 94501	(510)523-5528

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	12,000	gasoline	Removed	7/02/90
2	12,000	diesel	Removed	7/02/90
3	250	waste oil	Removed	9/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Unknown

Site characterization complete? YES

Date approved by oversight agency: 1/18/96

Monitoring Wells installed? Yes Number: Three monitoring wells were installed in the former location of the two 12,000-gallon USTs, and one monitoring well was installed in the former location of the 250-gallon waste oil UST.

Proper screened interval? Wells MW-1 through MW-3 are screened from 5-to 15-feet bgs. The well located downgradient of the former 250-gallon waste oil UST, MW-1, is screened from 5- to 20-feet bgs.

Highest GW depth below ground surface: 3.92'bgs Lowest depth: 5.9'bgs for Wells MW-1 through MW-3

Highest GW depth below ground surface: 8.51'bgs Lowest depth: 9.52'bgs for Well MW-1, located downgradient from the former waste oil UST.

Flow direction: The groundwater gradient in the vicinity of the former 12,000-gallon USTs is towards the northwest. The presumed gradient flow in the vicinity of the former 250-gallon UST is to the north.

Most sensitive current use: **Unknown**

Are drinking water wells affected? **NO** Aquifer name: **Unknown**

Is surface water affected? **NO** Nearest affected SW name: **None**

Off-site beneficial use impacts (addresses/locations): **None**

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

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	2-12,000 gallons	H & H Ship Service Co. 220 China Basin Street San Francisco, CA 94107	7/02/90
Tank	250-gallon UST	Erickson 255 Parr Blvd., Richmond	9/91

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)
Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[2]	After[3]	Before[1]	After[6]
TPH (Gas)	860	91	24,000	ND
TPH (Diesel)	5,700	2200	0.7	ND
Benzene	ND	ND	870	ND
Toluene	3.9	1	520	ND
Xylene	140	9.2	4,200	ND
Ethylbenzene	13	0.84	ND	ND
Total Oil & Grease	11,000[4]	5300	43,000[5]	ND

III. Continued.....

	Soil (ppm) Before	Water (ppb) Before
Ethylene Dibromide	NA	0.41
Organic Lead	55	ND
nickel	50[7]	ND
zinc	80[7]	ND
chromium	50[7]	60[5]
cadmium	0.41[3]	ND
PCBs		ND
SVOCs		ND
other VOCs (METHOD 8240)	ND	ND

[1]- These values are from the "grab" groundwater sample, W-1, that was collected from the tank excavation pit for the 2-12,000-gallon USTs.

[2]- These values are from the initial soil sample collected from the 250-gallon waste oil tank pit.

[3]-This value is from the second set of soil samples, SW-1 and PB-1, collected from the overexcavated waste oil tank pit.

[4]-waste oil pit sample SS-1

[5]-This concentration is from the "grab" groundwater sample, OP1, collected from the waste oil tank.

[6]-Results from Well MW-1, located near the former 250-gallon waste oil tank.

[7]-These concentrations resulted from the sample collected from SB8, collected near the dredged tailings.

IV. CLOSURE

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

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

Does corrective action protect public health for current land use? **YES**

Site management requirements: **NA**

Should corrective action be reviewed if land use changes? **NO**

Monitoring wells Decommisioned: **NO Will be decommisioned upon receipt of case closure.**

Leaking Underground Fuel Storage Tank Program

Number Decommisioned: Number Retained:

List enforcement actions taken: **None**

List enforcement actions rescinded:

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Juliet Shin** Title: **Senior HMS**
Signature: Date: 5/17/96

Reviewed by
Name: **Eva Chu** Title: **Hazardous Materials Specialist**
Signature: Date: 5/17/96

Name: **Tom Peacock** Title: **HMS Manager**
Signature: Date: 5-17-96

VI. RWQCB NOTIFICATION

Date Submitted to RB: RB Response:
RWQCB Staff Name: Kevin Graves Title: San. Engineering Asso. Date: 5/29/96

VII. ADDITIONAL COMMENTS, DATA, ETC.

This site is a 56-acre man-made peninsula in the Bay located on Ballena Isle(refer to attached figures 1 and 2). There are currently two 12,000-gallon underground storage tanks (UST) on site.

Two 12,000-gallon underground storage tanks (USTs) were formerly located in the parking lot immediately west of Building 1150 (refer to attached figure 3 and **Appendix A**). During the October 17, 1989 earthquake, the USTs were displaced upward by buoyant forces induced by the liquefaction of the surrounding saturated sands. As a result, the piping connections at the tank were broken. A small amount of product may have been released as a result of the pipeline break. These two USTs were replaced in July 1990 with two 12,000-gallon double-walled USTs. Six sidewall soil samples were obtained from the tank excavation at 5-feet below ground surface, and analyzed for TPHg, TPHd, and BTEX. One soil sample located near the piping connection to the diesel tank, along the east sidewall of the pit, contained 130ppm TPHd. No contaminants were identified in any of the other five soil samples. One "grab" groundwater sample, W-1, was collected from the tank excavation pit. Twenty-four thousand parts per billion (ppb) Total Petroleum Hydrocarbons as gasoline (TPHg), 870ppb benzene, 520ppb toluene, 4,200ppb xylenes, and 0.41ppb ethylene dibromide were identified in the water sample. It was uncertain as to why an analysis for ethylene

dibromide was conducted. Two weeks after W-1 was collected, a second water sample, W-2, was collected from the excavation. This sample was analyzed for the same constituents as W-1. Only 0.7ppb toluene was identified. Since water was not purged from the pit, the other contaminants may have volatilized.

One 250-gallon waste oil UST was removed from the site in September 1991 (refer to **Appendix B**). On September 27, 1991, one soil sample was collected from the tank pit and a two-point composite sample was collected from stockpiled soil. The soil sample from the tank pit identified 860ppm TPHg, 5,700ppm TPHd, 11,000ppm TOG, 3.9ppm toluene, 13ppm ethylbenzene, and 140ppm xylenes. The stockpiled soil sample identified 1,300ppm TPHd, 7.4ppm TPHg, 0.02ppm toluene, 0.027ppm ethylbenzene, 0.14ppm xylenes, 4,800ppm TOG, and trace concentrations of heavy metals. No halogenated volatiles (Method 8010) were identified in either the pit sample or the stockpiled soil sample. The samples were not analyzed for semi-volatile organics (Method 8270). The tank pit was overexcavated to dimensions of 9.5 feet by 11.5 feet by 9-feet deep. Two confirmatory soil samples were collected from the excavation: one sample, PB-1 was collected at 9-feet below ground surface (bgs) from the bottom of the pit, and one sample, SW-1, was collected from the northern sidewall at 8.5-feet bgs. These samples were analyzed for TPHg, TPHd, Total Oil & Grease (TOG), Chlorinated hydrocarbons, and heavy metals. Up to 2,200ppm TPHd, 91ppm TPHg, 4,200 ppm TOG, 1ppm toluene, 9.2ppm xylene, and 0.84ppm ethylbenzene, and traces of heavy metals, not exceeding threshold concentrations, were identified in these samples. On September 3, 1993, one "grab" groundwater sample, OP1, was collected from the waste oil tank pit. This sample was analyzed for TPHg, TPHd, BTEX, SVOCs, TOG, PCBs, and heavy metals. Analysis of OP1 identified 9,100ppb TPHd, 580ppb TPHg, 19ppb ethylbenzene, 0.5ppb xylenes, 60ppb chromium, and 43,000ppb TOG.

In the interest of a potential property transaction, Colony Advisor, Inc. as agent to G.A.P. Portfolio Partners engaged Law/Crandall, Inc. (LAW) to perform an environmental site assessment for Ballena Isle Marina in December 1992. LAW drilled three borings in the vicinity of the former 12,000-gallon USTs and converted them to groundwater monitoring wells, Wells MW-1 through MW-3 (refer to attached figure in Appendix A). Soil samples were collected from these wells at 5-feet bgs and analyzed for TOG, TPHg, BTEX, TPHd, and lead. Analysis of these soil samples did not identify any contaminants exceeding detection limits. The initial set of groundwater samples collected from these wells were analyzed for TPHd, TPHg, BTEX, and Total Lead. Analysis of this initial set of groundwater samples only identified 52ppb TPHg. Groundwater samples were collected from these wells for three more consecutive quarters and analyzed for TPHd, TPHg, and BTEX. During this period, only 98ppb TPHd was identified from Well MW-1 during the initial quarter of monitoring.

LAW also emplaced HP-1, a hydropunch, and five borings, B-1 through B-5, in the vicinity of the former 250-gallon waste oil UST. The "grab" groundwater sample collected from HP-1 was analyzed for TOG, BTEX, TPHg, TPHd, Method 8240 VOCs, and heavy metals. Analysis of this water sample only identified 0.3ppb toluene. Soil samples were collected from 10-feet bgs from borings B-1 through B-5. These samples were analyzed for TOG, TPHg, BTEX, TPHd, and Method 8240 VOCs. TOG was the only contaminant identified above detection limits, with the highest concentration being 110ppm.

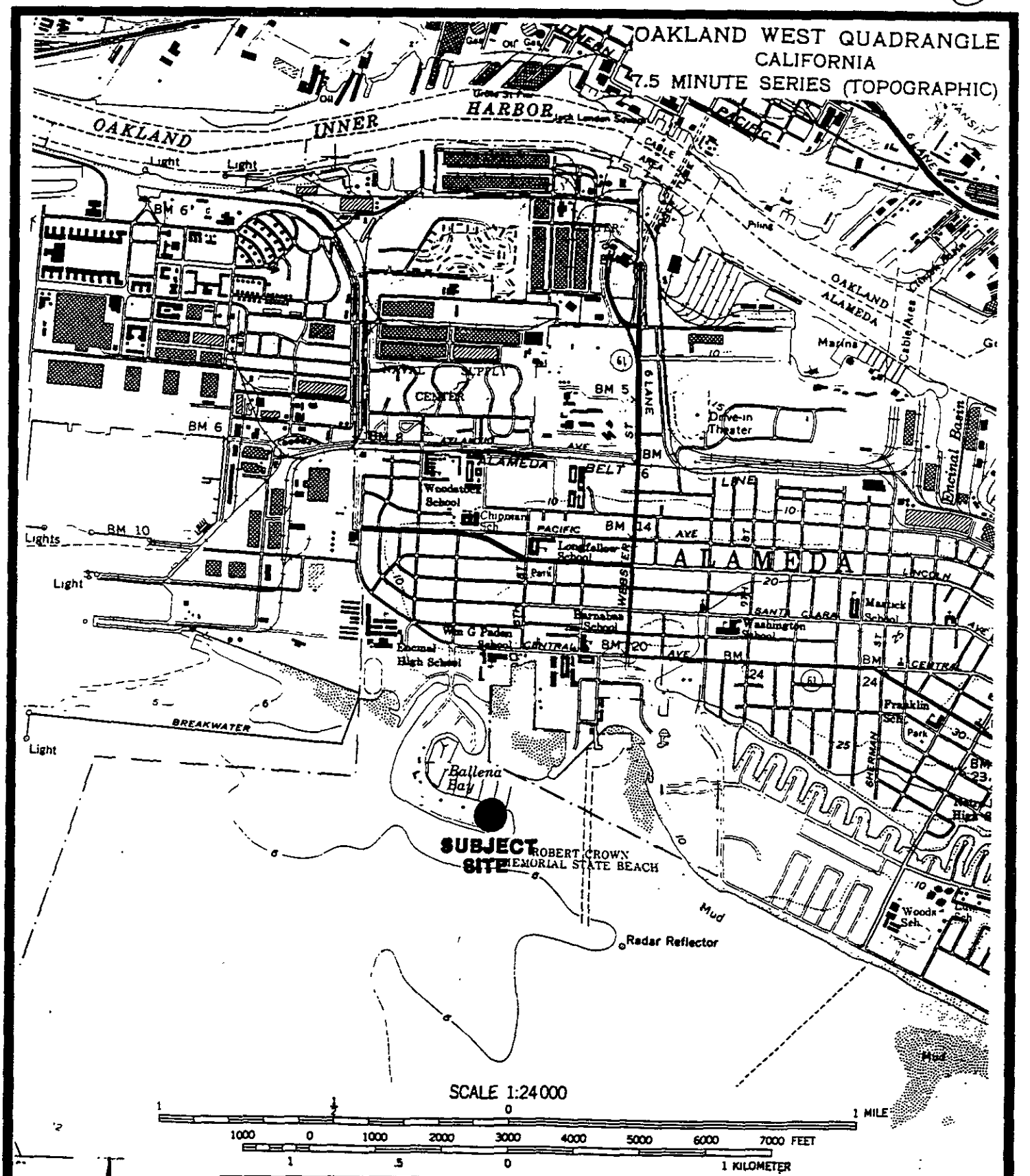
To define the extent of groundwater contamination observed in the former waste oil tank pit, one temporary well, TW-1, was installed downgradient of the pit on May 26, 1994 (refer to attached figure in Appendix B). This well was drilled down to 15-feet and screened from top to bottom. One groundwater sample was collected from TW-1. One soil sample was also collected from the southern sidewall of the tank pit, which abuts a building. These samples were analyzed for TPHd, TPHg, BTEX, and TOG. Analysis of the soil sample identified 2,100ppm TOG and 460ppm TPHd, and analysis of the water sample identified 280ppb TPHd.

Based on the levels identified in TW-1 and the proximity of this well to the Bay, a permanent monitoring well, MW-1, was installed in this location in December 1994. A soil sample collected from the boring at 6.3-feet bgs did not identify TPHd or BTEX. This well was sampled for four consecutive quarters. The first and third quarter groundwater samples were analyzed for TPHd, TPHg, and BTEX, and the second and fourth quarter groundwater sample results were analyzed for TPHd and TOG. No contaminants were identified in any of these water samples.

According to the LAW report, four 4,000-gallon USTS containing leaded gasoline and diesel fuel were removed from the site in 1984 to allow construction of Building 1150. However, the sampling results of MW-4, referenced in the next paragraph, indicate that no contamination resulted from these USTs. Additionally, an abandoned 250-gallon aboveground storage tank, formerly containing diesel, is located on the property. The spigot from the tank is located directly above what appears to be a screened sump.

MW-4 was hand augered down to 9-feet bgs near the former 4,000-gallon USTs. LAW also hand augered four soil borings, SB-5, SB-6, SB-7, and SB-8, in various parts of the site. No information is available as to where SB-5 was placed. However, it is known that boring SB-6 was placed near the abandoned aboveground diesel tank to 5-feet bgs, boring SB-7 was placed near some drums of waste oil to 4-feet bgs, and boring SB-8 was placed in the dredged tailings disposal area to a depth of 5-feet bgs. Sample SB-6 was analyzed for TPHd and BTEX. Sample SB-7 was analyzed for TPHg, TPHd, BTEX, VOCs, O&G, semi-volatile organics, pesticides, PCBs, and heavy metals. Sample SB-8 was analyzed for semi-volatile organics, O&G, and

seventeen metals. Samples collected from MW-4 were analyzed for TPHg, TPHd, TOG, BTEX, and lead. No TPHg, BTEX, TPHd, TOG, or lead was identified from soil or grab groundwater samples collected from MW-4. Sample SB-6 did not identify any contaminants above detection limits. Sample SB-7 only identified 83ppm TOG. Sample SB-8 identified 130ppm TOG and trace concentrations of metals, not exceeding established threshold limits.



Site Location and topographic Map
BALLENA ISLE MARINA
1150 Ballena Boulevard
Alameda, California

Clayton Project No. 55434.00

Figure
1

55434-00-16

Clayton
ENVIRONMENTAL CONSULTANTS

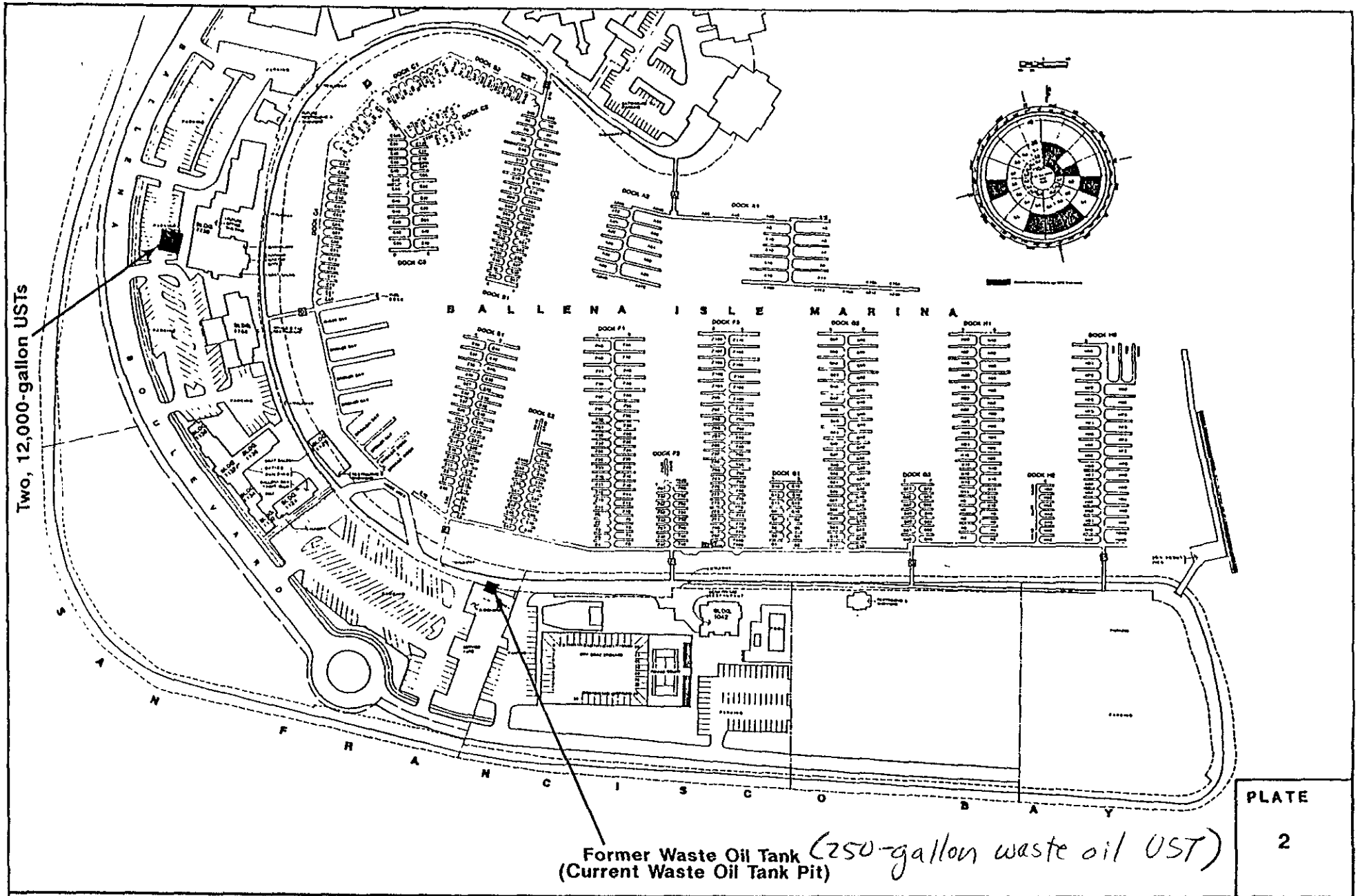


PLATE 2

CET Environmental Services, Inc.

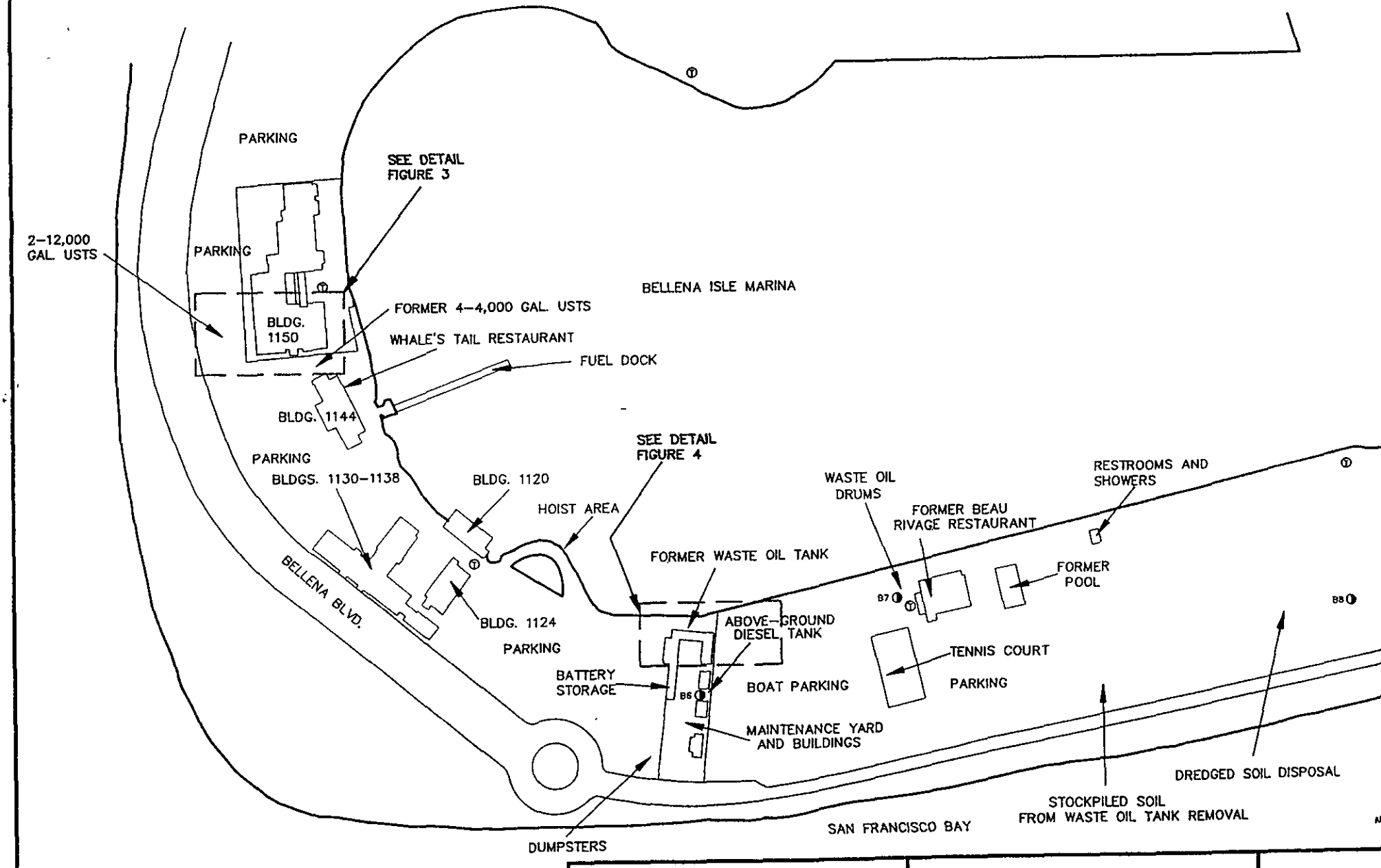
Site Plan

Ballena Bay Yacht Harbor
1150 Ballena Blvd., Alameda, CA

Ballena Bay Marina

JOB NUMBER	DATE
3571	1/94

(2)



LEGEND

- T TRANSFORMER
- ◑ SOIL BORING

G.A.P. PORTFOLIO PARTNERS
C/O COLONY ADVISORS, INC.
LOS ANGELES, CALIFORNIA

LAW/CRANDALL, INC.

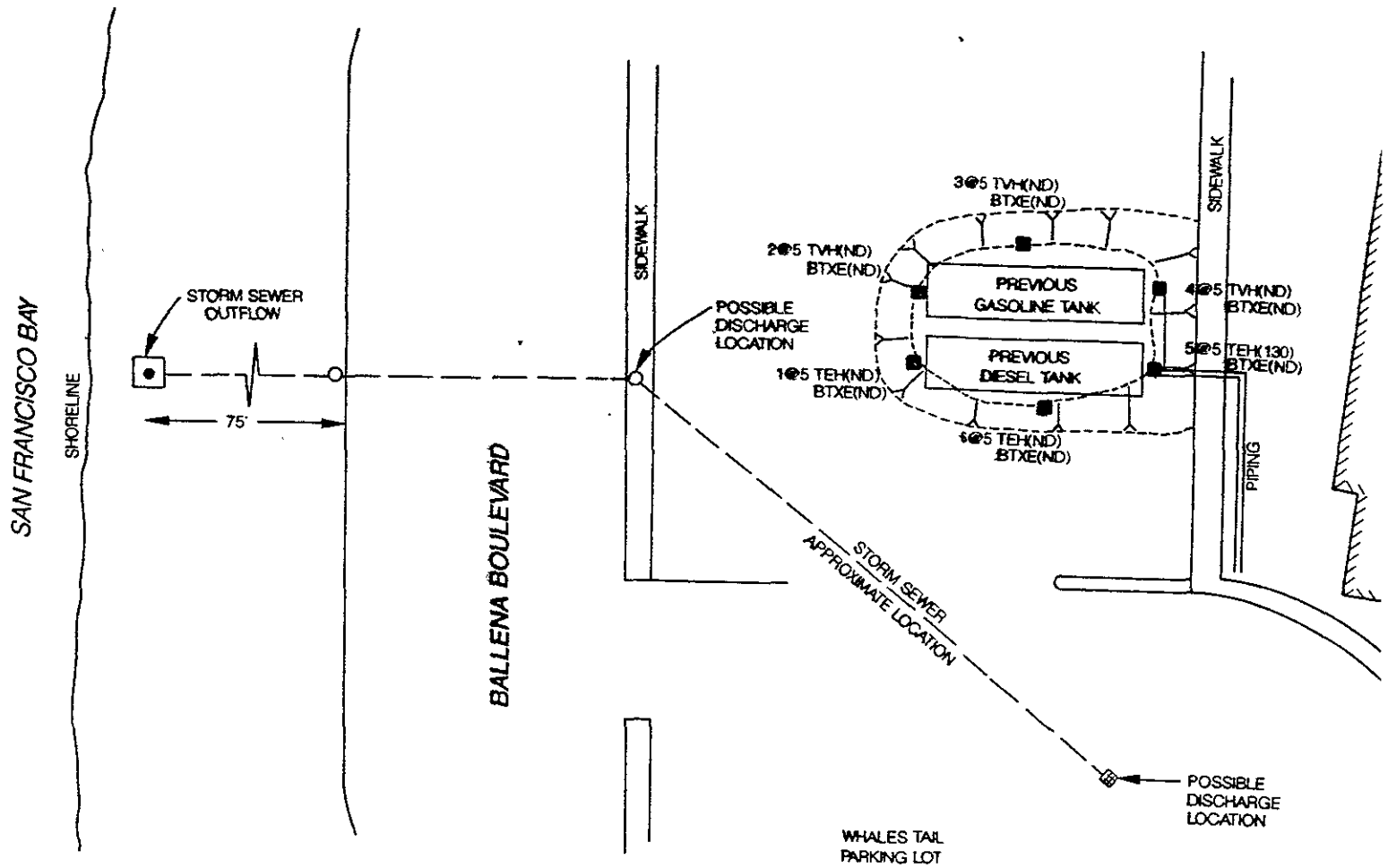
GE
BALLE
ALAME

JOB NO. 2123–20669–1

(3)

Info on two former
12,000-gallon USTs

Appendix A



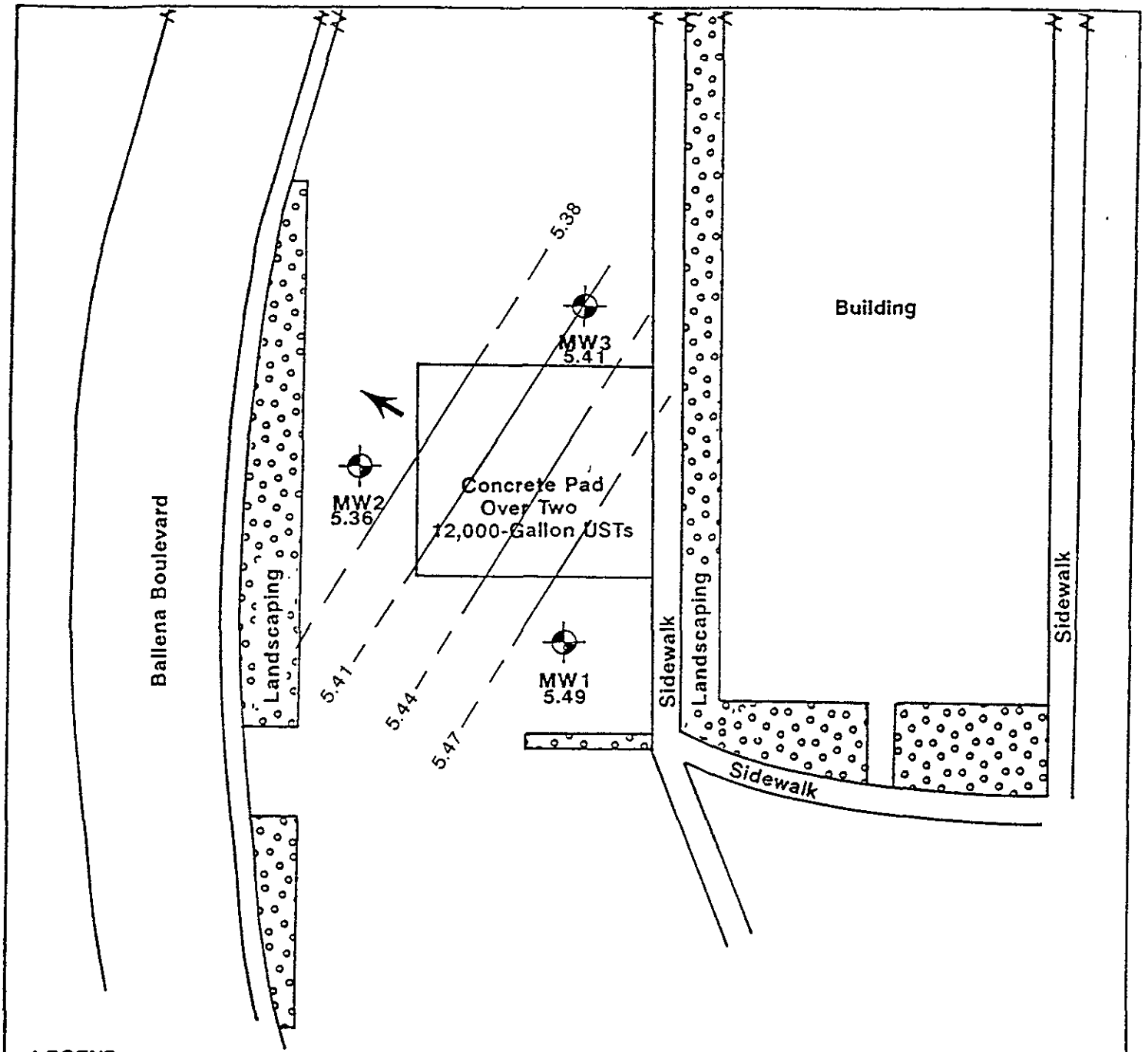
Former two 12,000-gallon USTs.

N

APPROXIMATE SCALE

0 20

Subsurface Con



LEGEND

- Groundwater Monitoring Well
- Line of Equal Groundwater Elevation (feet)
- Direction of Groundwater Flow

0 25

Scale in Feet

N

Base Map Source: LAW/CRANDALL, INC.
Job # 2123-20559-1, Figure 3.

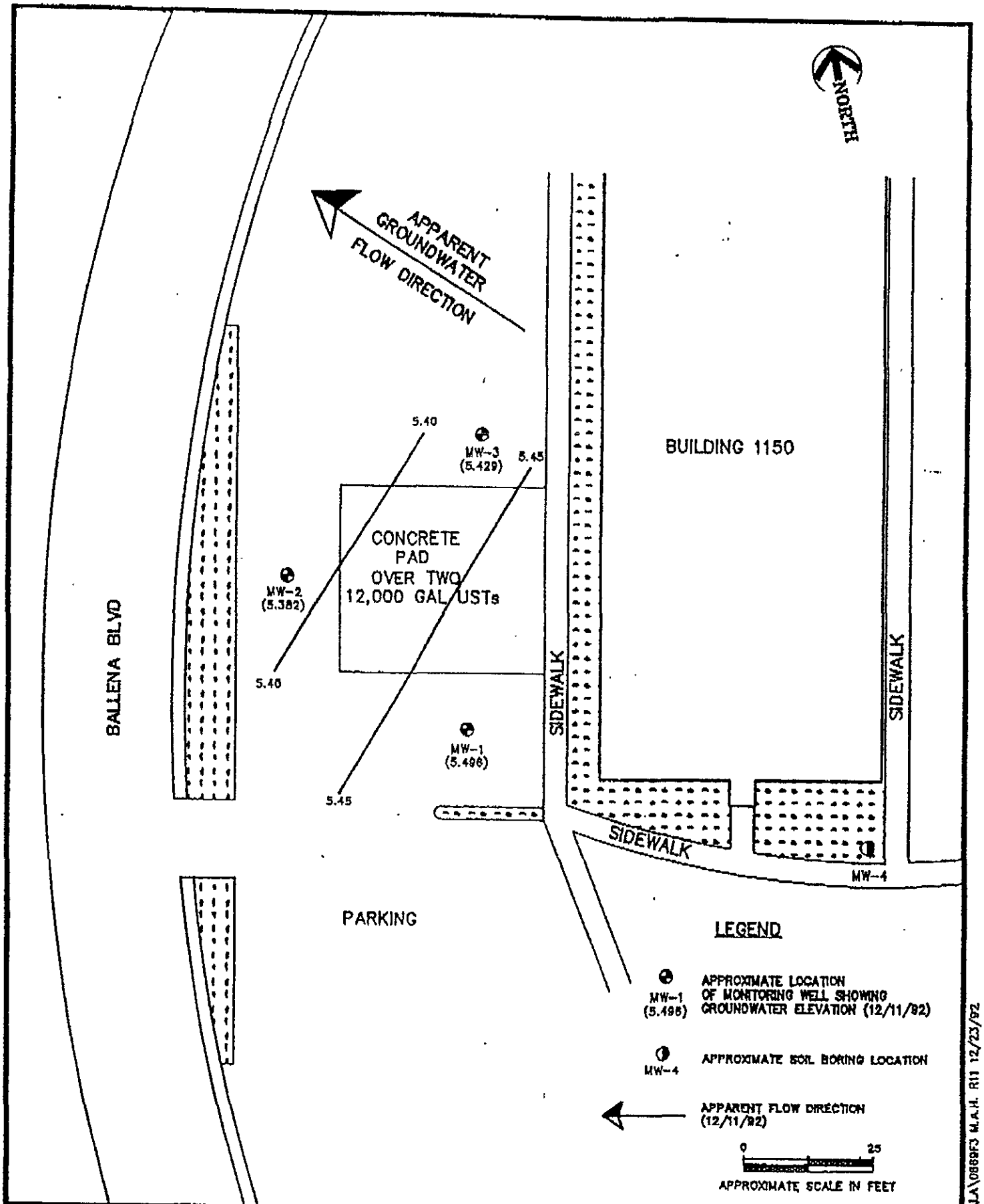
Groundwater Elevations and Contours

Ballena Bay Yacht Harbor
1150 Ballena Blvd., Alameda, CA

CET Environmental Services, Inc.

Ballena Bay Marina

JOB NUMBER	DATE	PLATE
3571	1/94	4



G.A.P. PORTFOLIO PARTNERS
C/O COLONY ADVISORS, INC.
LOS ANGELES, CALIFORNIA

LAW/CRANDALL, INC.

EXISTING UST AREA
GE SITE # 1026
BALLENA ISLE MARINA
ALAMEDA, CALIFORNIA

JOB NO. 2123-20659-1 FIGURE 3

G:\DWGS\GECAPTOL\LA\06659F3 M.A.H. R11 12/23/92

MW-1 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 3 in., Gravel Base 3 in.				Locking vault and watertight well cap	
0.5	FILL-SAND (SP): tan - light grey; 90-95% fine sand; 5-10% silt; poorly graded; subangular; very loose; slightly moist; no unusual odors or discoloration				Grout Seal Bentonite pellets 2" dia. PVC blank Schedule 40 casing	
	NOTE: Sand becoming light - medium grey, no unusual odors or discoloration.		SA		▽	0
					▽	
					#3 filter sand	
	NOTE: Soil is light-medium grey; 80% fine sand; 20% shell fragments; very loose; very wet; no unusual odors or discoloration; fill				2" dia. PVC slotted Schedule 40 casing (0.02 inch slots)	0
15.0	Boring terminated at approximately 15 feet, groundwater encountered at a depth of approximately 7 feet. Some sloughing of sands, no unusual odors or discoloration.				Threaded pointed endcap	0

REMARKS:

1) Boring advanced using 8-inch hollow stem augers.
   Groundwater encountered at depth of approximately 7 feet.
3) SA = Sample Analyzed
4) ▽ = Stabilized groundwater level
5) ▽ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-1
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1

Law/Crandall Inc.

MW-2 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 6 in., Gravel Base 3 in.				Locking vault and watertight well cap	
0.8	FILL-SAND (SP): Tan-light grey; 90% fine grained sand; 10% silt; some silt lenses; poorly graded; subangular; loose; moist; no unusual odors or discoloration				Grout seal Bentonite pellets 2" dia. PVC blank Schedule 40 casing	
	NOTE: Becoming light - medium grey at 3 feet		SA		▽	20
					#3 filter sand	
					▽	
	NOTE: Sand is light-medium grey; 90% fine - medium sand; 5-10% silt; trace shell fragments; poorly graded; subangular; loose-very loose; wet; no unusual odors or discoloration, fill				2" dia. PVC slotted Schedule 40 casing (0.02 inch slots)	120
	NOTE: Shell fragments make up 15% of soil					
15.0	Boring terminated at approximately 15 feet, groundwater encountered at a depth of approximately 7 feet. Some sloughing of sands, no unusual odors or discoloration.				Threaded pointed endcap	15

REMARKS:

1) Boring advanced using 8-inch hollow stem augers.
2) Groundwater encountered at a depth of approximately 7 feet.
3) SA = Sample Analyzed
4) ▽ = Stabilized groundwater level
5) ▽ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-2
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1

Law/Crandall Inc.

MW-3 TEST BORING RECORD

DEPTH (FEET)	DESCRIPTION	LITH	S	DIAGRAM	MATERIALS	OVA READINGS
0.0	Asphalt 4 in., Gravel base 3 in.				Locking vault and watertight well cap	
0.6	FILL-SAND (SP) tan-light grey: 90% fine sand; 10% silt; poorly graded; subangular; loose; slightly moist; no unusual odors or discoloration		SA		Grout seal Bentonite pellets 2' dia. PVC blank Schedule 40 casing	
	NOTE: Sand becoming light - medium grey, no unusual odors or discoloration				▽	0
					#3 filter sand ▽	
	NOTE: Silt content is decreasing; trace shell fragments; no unusual odors or discoloration.				2" dia. PVC slotted Schedule 40 casing (0.02 inch slots)	0
15.0	Boring terminated at approximately 15 feet, groundwater encountered at a depth of approximately 7 feet. Some sloughing of sands. No unusual odors or discoloration.				Threaded pointed endcap	0

REMARKS:

1)Boring advanced using 8-inch hollow stem augers.

)Groundwater encountered at a depth of approximately 7 feet.

3)SA = Sample Analyzed

4)▽ = Stabilized groundwater level

5)▽ = Drilling water level

DRILLED BY	G. SIERRA	BORING NUMBER	MW-3
LOGGED BY	ATM	DATE STARTED	12/4/92
CHECKED BY	MIM	DATE COMPLETED	12/4/92
		JOB NUMBER	2123-20669-1

Law/Crandall Inc.

Table 2

Groundwater Analytical Data Summary-Petroleum Hydrocarbon Constituents
1150 Ballena Blvd., Alameda, California

Well No.	Date Sampled	TPH/d[a] (µg/L)[g]	TPH/g[b] (µg/L)[g]	B[c] (µg/L)[g]	T[c] (µg/L)[g]	E[c] (µg/L)[g]	X[c] (µg/L)[g]	SVOCs[d] (µg/L)[g]	TOG[e] (µg/L)[g]	PCBs[f] (µg/L)[g]
MW1	09/02/93	98	<50[h]	<0.5	<0.5	<0.5	<0.5	NA[i]	NA	NA
	12/14/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA[i]	NA	NA
	03/30/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
MW2	09/02/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	03/30/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
MW3	09/02/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	12/14/93	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
	03/30/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
OP1	09/02/93	9,100	580	<0.5	<0.5	19	0.5	ND[j]	43,000	<0.5

a. TPH/d = total petroleum hydrocarbons as diesel
b. TPH/g = total petroleum hydrocarbons as gasoline
c. B = benzene; T = toluene; E = ethylbenzene; x = total xylenes
d. SVOCs = semi volatile organic compounds
e. TOG = total oil and grease
f. PCBs = polychlorinated biphenols
g. µg/L = micrograms per liter, equal to parts per billion (ppb)
h. <50 = less than method detection limit of 50 µg/L
i. NA = analysis not requested
j. ND = no analytes detected above respective method detection limits (see analytical test reports for individual analyte detection limits)

Table 1

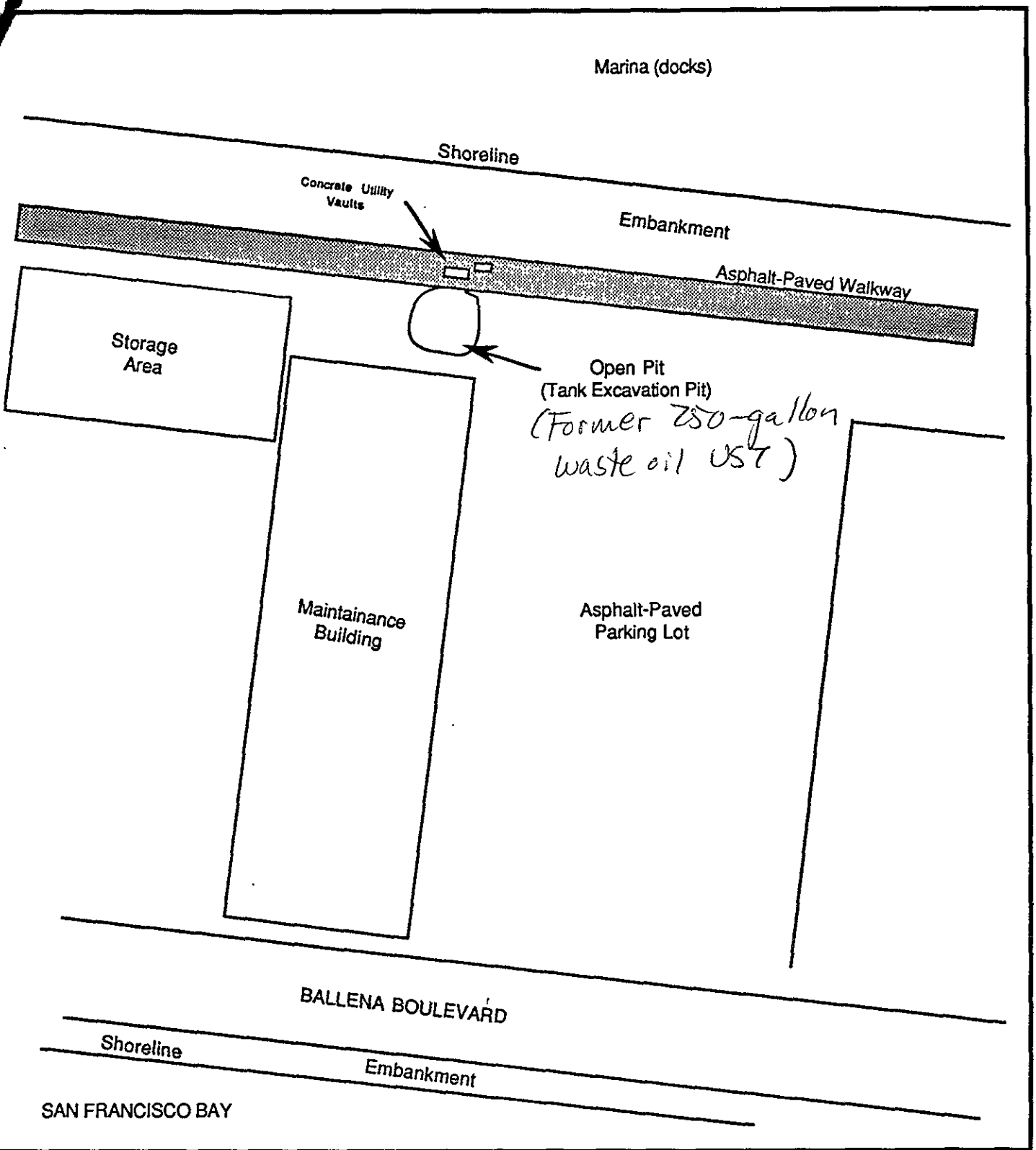
Groundwater Elevation Summary
1150 Ballena Blvd., Alameda, California

Well No.	TOC Elevation[a]	Date Measured	Depth to Groundwater[b]	Groundwater Elevation[c]
MW1	9.41	09/02/93	4.50	4.91
		12/14/93	3.92	5.49
		03/30/94	4.23	5.18
MW2	9.81	09/02/93	5.00	4.81
		12/14/93	4.45	5.36
		03/30/94	4.74	5.07
MW3	9.74	09/02/93	5.90	3.84
		12/14/93	4.33	5.41
		03/30/94	4.67	5.07

a. TOC Elevation = top of well casing elevation; measured in feet above a benchmark with an assumed elevation of 10.00 feet. (Data provided by Law/Crandell, Inc.)
b. Depth to Groundwater = measured in feet below top of well casing.
c. Groundwater Elevation = depth to groundwater subtracted from TOC elevation.

Info on Former
250-gallon waste oil UST

Appendix B



Not to Scale

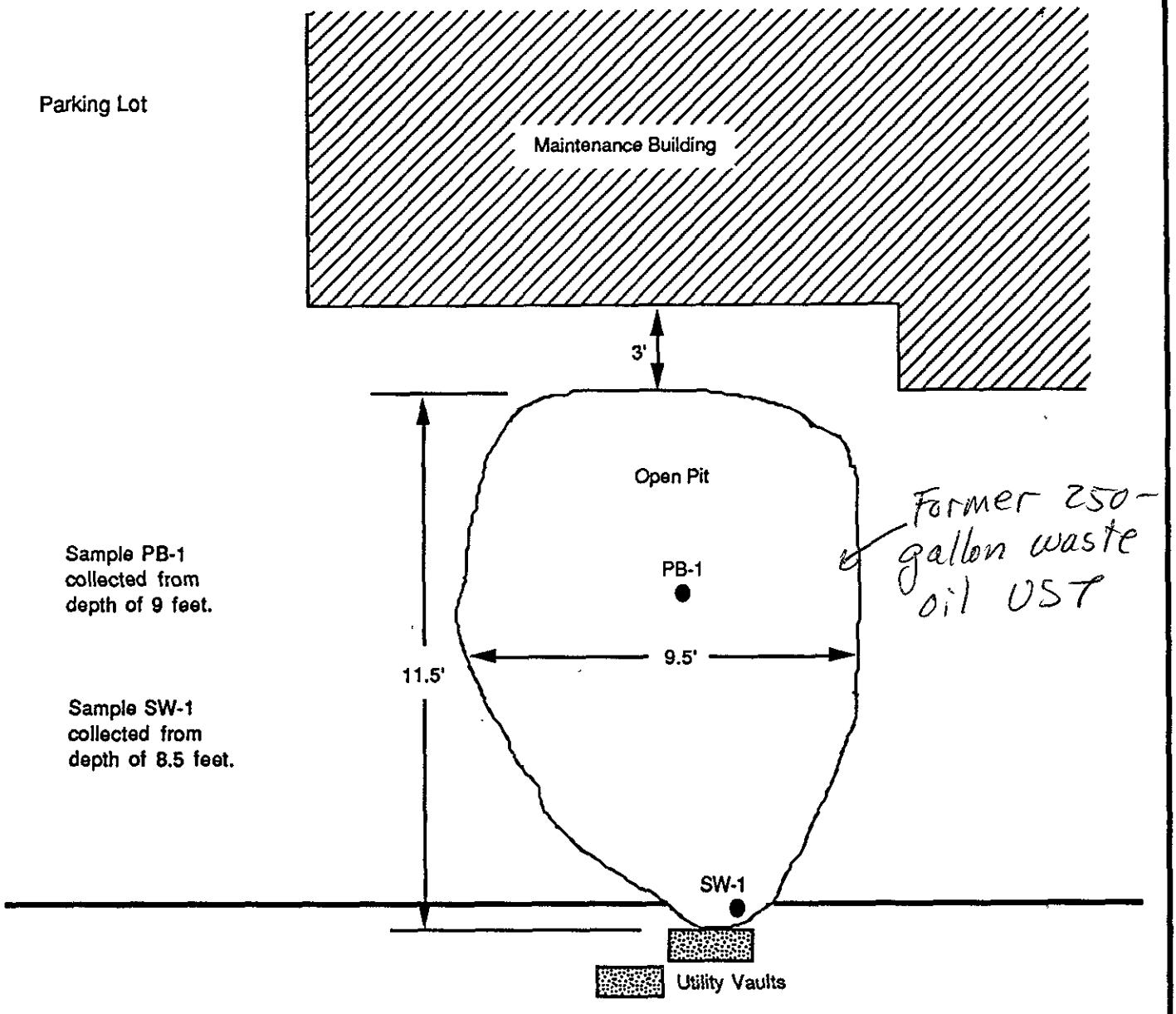
N

Site of former 750-gallon waste oil UST

ENSR

SITE PLAN
BALLENA ISLE MARINA
1150 BALLENA BOULEVARD, ALAMEDA, CALIFORNIA

DRAWN BY: BRIAN HO	DATE: 2/19/92	PROJECT NO.
CHK BY:	REVISED:	FIGURE NO.: 1



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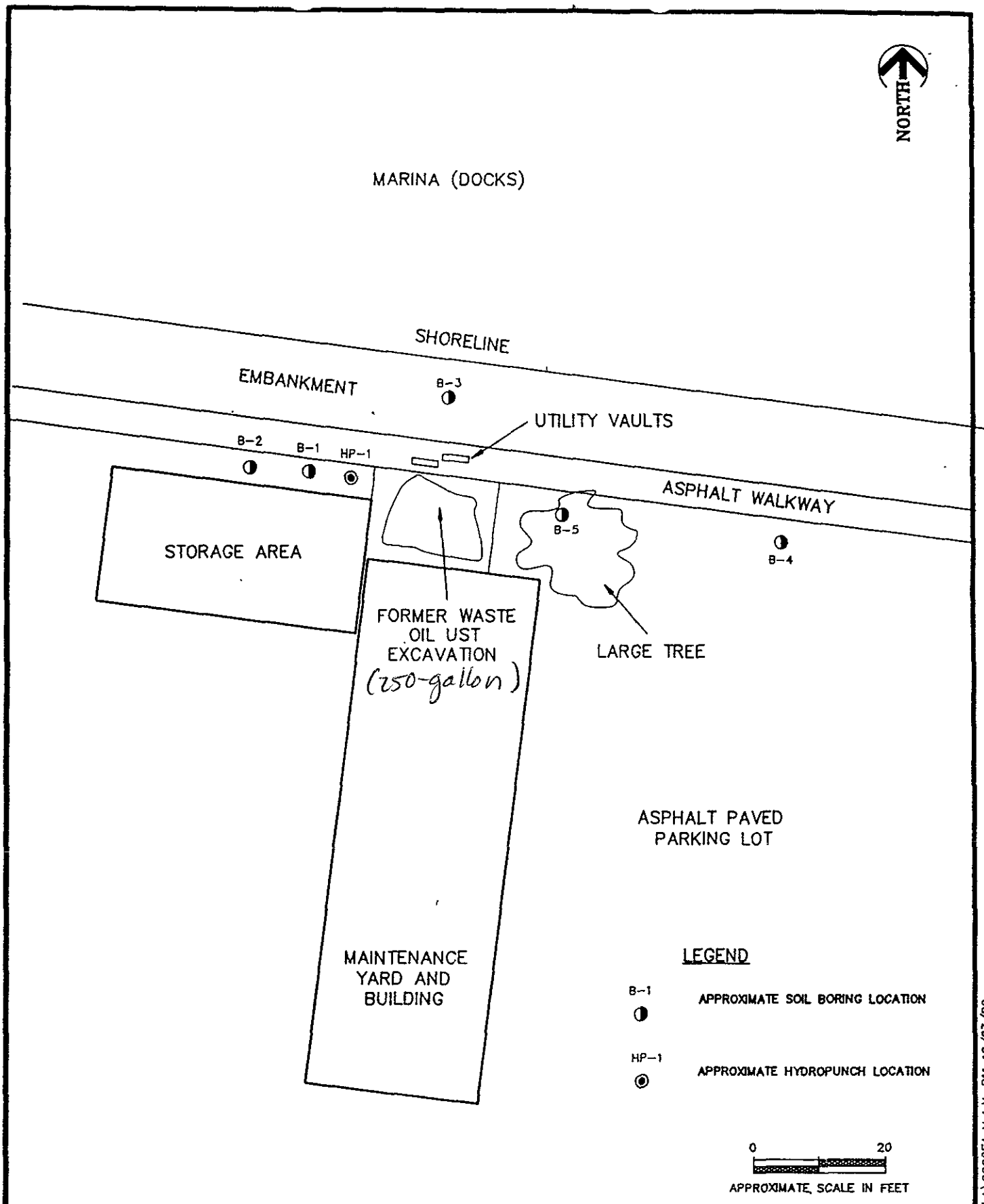
ENSR Consulting and Engineering

SOIL SAMPLE LOCATION MAP
BALLENA ISLE MARINA
1150 Ballena Boulevard, Alameda, California

DRAWN BY: Brian Ho	DATE: 5/7/92	PROJECT NO. 8700-114.000
CHK BY:	REVISED:	FIGURE NO.: 2

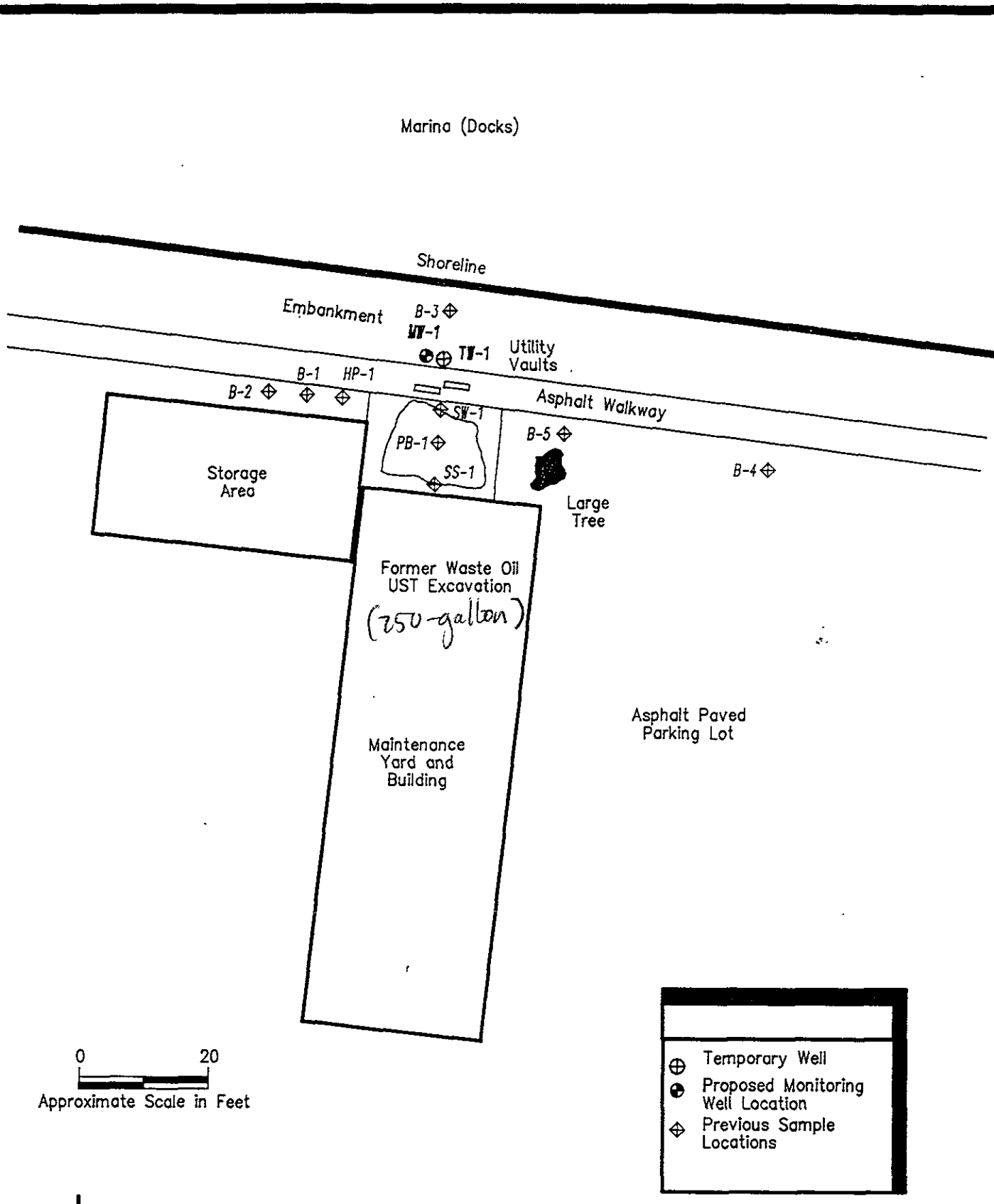


G.A.P. PORTFOLIO PARTNERS
C/O COLONY ADVISORS, INC.
LOS ANGELES, CALIFORNIA

LAW/CRANDALL, INC.

FORMER WASTE OIL
UST AREA
GE SITE # 1026
BALLENA ISLE MARINA
ALAMEDA, CALIFORNIA
JOB NO. 2123-20669-1 FIGURE 4

C:\DWGS\GECAPTOL\LA\0669F4 M.A.H. R11 12/23/92



Monitoring Well Locations
BALLENA ISLE MARINA
1150 Ballena Boulevard
Alameda, California

Clayton Project No. 57787.00

Figure

57787-00-17

Clayton
ENVIRONMENTAL
CONSULTANTS

Monitoring Well No. MW-1

PROJECT: Ballena Isle Marina
DRILL RIG: Hollow Stem Auger
INITIAL GW DEPTH: ft.

DATE: 11/9/94
HOLE DIA.: 8 in.
FINAL GW: ft.

LOGGED BY: D. Dastmalchi
SAMPLER: Modified Cal
HOLE ELEV.:

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	BLOWS/FOOT
Sand, dark gray (2.5 YR, 4/4), moist, with shell fragments	SP		0–4		
Sand, dark gray (2.5 YR, 4/4) little to no fines, with shell fragments			5–6		6
Saturated			7–12		
Sand, dark gray (2.5 YR, 4/4), clayey, wet	SC		13–20		
Total Depth of Boring = 20 feet			20		

WELL CONSTRUCTION DETAIL

- Christy Box
- Cement Grout Seal
- 2" Ø Sch.40 Blank PVC
- Bentonite Pellet Seal
- 2" Ø Sch.40 Slotted PVC (0.010")
- 2/12 Sand Pack

Clayton Environmental Consultants
1252 Quarry Lane
Pleasanton, California

Notes:

Project No. 57787.00

TABLE 4.1: SOIL SAMPLE RESULTS FOR WASTE OIL AREAS
BALLENA ISLE MARINA, ALAMEDA, CA
CONTROL NUMBER 1026, GREAT AMERICAN PORTFOLIO
LAW/CRANDALL PROJECT NO. 2123-20669-1

TOG (ppm)	110	60	100	80	53
Sample ID:	B-1	B-2	B-3	B-4	B-7
Sample Depth, Feet:	10	10	10	10	5
Sample Date:	12/7/92	12/7/92	12/7/92	12/7/92	12/7/92
TPH/G	ND<1	ND<1	ND<1	ND<1	ND<1
TPH/D	ND<10	ND<10	ND<10	ND<10	ND<10
VOCs	ND	ND	ND	ND	ND
BTEX					
Benzene	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Toluene	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Ethylbenzene	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Xylenes	ND<0.003	ND<0.003	ND<0.003	ND<0.003	ND<0.003
Semi-volatiles	ND	ND	ND	ND	ND
Pesticides and PCBs	ND	ND	ND	ND	ND
Metals					
Cadmium	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chromium	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Lead	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Nickel	ND<1	ND<1	ND<1	ND<1	ND<1
Zinc	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Notes:
All analytical results in mg/kg except lead.
TPH/D: Total Petroleum Hydrocarbons as Diesel by EPA Method Mod. 8015.
TPH/G: Total Petroleum Hydrocarbons as Gasoline by EPA Method 5030/Mod. 8015.
Pesticides/PCB: Polychlorinated biphenyls by EPA Method 8080.
VOC: Volatile Organics by EPA Method 8240.
BTEX: By EPA Method 8020.
Oil & Grease: By EPA Method 413.1 (5520 D & F).
Pesticides: By EPA Method 8080.
Semi-Volatile: By EPA Method 8270.
Metals: By California Administrative Code Title 22 and SW0846 Method 6010; results in mg/l.

Table 1

Analytical Results for Soil Samples Collected by TAL in September 1991
All Concentrations in Milligrams per Kilogram (mg/kg)

Sample	TPH-D	TPH-G	TOG	Toluene	Ethylbenzene	Xylenes
1	5,700	860	11,000	3.9	13	140

TPH-D Total petroleum hydrocarbons as diesel
TPH-G Total petroleum hydrocarbons as gasoline
TOG Total oil and grease, hydrocarbons

Subsequently, the excavation pit was overexcavated to remove petroleum hydrocarbon impacted soils. Two soil samples were collected from the overexcavated tank pit. One sample was collected from the north wall of the pit (SW-1) and the other sample was collected from the bottom of the pit (PB-1). The analytical results identified TPH-D and TPH-G in the soil samples from the excavation pit. Analytical results for petroleum hydrocarbons are summarized in Table 2.

Table 2

Analytical Results for Soil Samples Collected by ENSR in May 1992
All Concentrations in Milligrams per Kilogram (mg/kg)

See next table

Sample	TPH-D	TPH-G	TOG	Benzene	Toluene	Ethylbenzene	Xylenes
SW-1	2,200	91	5,300	ND	ND	ND	1.9
PB-1	1,800	79	4,200	ND	1	0.84	9.2

ND = Not detected at or above the analytical detection limits

Further excavation of the contaminated soil was not possible because the excavation pit is bounded by a building foundation on the south and southwest, and utility vaults on the north.

In December 1992 Law/Crandall, Inc. drilled five soil borings and collected five samples (B-1 through B-5) from the surrounding area of the former waste oil UST. The soil samples were collected from approximately 10 feet below ground surface (bgs) and approximately 8 to 34 feet away from the excavation pit. In addition, one grab water sample was collected from hydropunch (HP-1) located approximately 8 feet northwest of the pit.

ENSR

TABLE 1

Summary of Analytical Results of Soil Samples from Ballena Isle Marina

Sample No.	Diesel	Gasoline	Xylene	Toluene	Benzene	Ethylbenzene	Oil & Grease
SW-1	2,200 ppm	91 ppm	1.9 ppm	ND	ND	ND	3,500 ppm
PB-1	1,800 ppm	79 ppm	9.2 ppm	1 ppm	ND	0.840 ppm	4,200 ppm

	Metals				
Sample No.	Cadmium	Chromium	Lead	Nickel	Zinc
SW-1	0.41 ppm	16.2 ppm	13 ppm	13.3 ppm	13.7 ppm
PB-1	ND	15.8 ppm	4.5 ppm	14.0 ppm	13.7 ppm

ND = Not Detected at or above the limit of detection of 0.5 ppm.

northwest of the pit.

The soil and grab water samples were analyzed for TPH-G, TPH-D, BTEX, VOCs, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, TOG, and Metals.

TOG was detected in the soil samples ranging from 53 milligrams per kilogram (mg/kg) 110 mg/kg. The grab water sample contained a toluene concentration of 0.3 micrograms per liter (µg/L). The other analytes in the soil and grab water samples were not detected at or above the analytical detection limits.

On October 2, 1993, Hydrocarbon Consultants collected a grab water sample from the excavation pit (OP-1). Analytical results for the soil sample OP-1 are summarized in Table 3.

Table 3

Analytical Results for Grab Water Sample OP-1
Collected by Hydrocarbon Consultant in September 1993
All concentrations in µg/L

Sample	TPH-D	TPH-G	TOG	Toluene	Ethylbenzene
OP-1	9,100	580	43,000	3.9	19

In June, 1994 Clayton collected one soil and one groundwater samples to further define the extent of soil and possible groundwater contamination. To collect the groundwater samples one temporary well (TW-1) was installed near the former UST excavation pit. The well was placed in the estimated downgradient direction of the former tank location. The temporary well location is shown in Figure 2. The soil sample (SS-1) was collected from the south wall of the excavation pit at approximately 8 feet bgs. The soil sample was collected from the excavation wall to determine the extent of contamination within the pit. The soil and groundwater samples were analyzed for TPH-D, TPH-G, BTEX, TOG. In addition the groundwater sample was analyzed using EPA Method 160.1 for total dissolved solids (TDS).

Analytical results identified the following:

- TPH-D was detected in the soil sample at concentration of 460 mg/kg
- TPH-D was detected in the groundwater sample at concentration of 260 micrograms per liter (µg/l)