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

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

January 10, 1997
STID 4013

Attn: John Prall
Port of Oakland
Environmental Dept.
530 Water St.
Oakland CA 94607

REMEDIAL ACTION COMPLETION CERTIFICATION

RE: Port of Oakland, Yusen Terminal/Berth 23/1195 Maritime St., Oakland CA 94607
Case File Number 4013

Dear Mr. Prall,

This letter confirms the completion of site investigation and remedial action for the three underground storage tanks formerly located at the above referenced site. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks is 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 Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations.

Attached is a copy of the Case Closure Summary, which was reviewed and approved by this agency and the Regional Water Quality Control Board (RWQCB). If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761.

Sincerely,

Mee Ling Tung, Director

cc: Acting Chief, Environmental Protection Division
Kevin Graves, RWQCB
Lori Casias, SWRCB (with attachment)
Dave Deaner, SWRCB, UST Cleanup Fund Program
Jennifer Eberle (3 copies of letter only)

LOP/Completion
je.4013clos.let
enclosure (clos sum)

01-0939

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date: 4/26/96**

Agency name: **Alameda County-HazMat** Address: **1131 Harbor Bay Pky**
City/State/Zip: **Alameda CA 94502** Phone: **(510) 567-6700**
Responsible staff person: **Jennifer Eberle** Title: **Hazardous Materials Spec.**

II. CASE INFORMATION

Site facility name: **Port of Oakland, Yusen Terminal/Berth 23/1195 Maritime St.**
Site facility address: **Berth 23/1195 Maritime St., Oakland CA 94607**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **4013**
URF filing date: 12/21/92 SWEEPS No: **N/A**

Responsible Parties: **Addresses:** **Phone Numbers:**
1. Port of Oakland, Environmental Dept., attn: John Prall, 530 Water St., Oakland CA 94607 (510-272-1373)
2. Stevedoring Services of America, attn: Jim Tucker, 1195 Maritime St., Oakland CA 94607

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	4,000	gasoline	removed	9/13/93
2	10,000	diesel	removed	9/13/93
3	500	waste oil	removed	9/13/93

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: release of gasoline during tightness test
Site characterization complete? YES
Date approved by oversight agency: 4/26/96
Monitoring Wells installed? YES Number: 4
Proper screened interval? YES, based on first water: 7-17'bgs (MW1-2) and 5-15'bgs (MW3-4)
Highest Groundwater Elevation (GWE): 3.57' Lowest GWE: 5.80'
Flow direction: generally west, with fluctuations between W-SW and NW
Most sensitive current use: industrial/marine terminal
Are drinking water wells affected? NO Aquifer name: NA
Is surface water affected? NO Nearest affected SW name: NA
Off-site beneficial use impacts (addresses/locations): unknown
Report(s) on file? **YES** Where is report(s) filed?
Alameda County, 1131 Harbor Bay Pky, Alameda Ca 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment of Disposal w/destination)	Date
Tank	4,000 gal gasoline	disposed by Erickson #92743448	9/13/93
	10,000 gal diesel	disposed by Erickson #92202475	9/13/93
	500 gal waste oil	disposed by Erickson #92202475	9/13/93
Contents of Diesel UST	2,500 gal	disposed by Erickson #93231534	9/13/93
Soil	5,000 yd3	hauled to the Port's Bioremediation site, Langley and Doolittle Streets, Oakland	
Pit water	2,500 gal	recycled by Gibson Oil (HW Man# 93231534)	9/13/93

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

Contaminant	Soil (ppm)		Water (ppb)	
	Before*	After@	Before^	After^^
TPH (Gas)	2,500	2,300	52,000	6,700
TPH (Diesel)	670#	1,200	81,000	1,100
Benzene	85	28	9,700	610
Toluene	390	140	8,500	26
Xylene	400	160	3,800	145
Ethylbenzene	75	30	630	85
Total lead	8,500**	500	NA	ND
Oil & Grease	4,800##	1,200	NA	2,600

Comments (Depth of Remediation, etc.):
*Before soil concentrations are from the eight borings placed around the USTs prior to UST removal; see Table 1 for a complete list of constituents.
**To verify this concentration, soil from a different portion of the sample was analyzed and found to contain 4,000 mg/kg total lead.
#This concentration was from the sample in the waste oil tank pit after UST removal. It is being noted here because it is higher than the concentration found during the 8 borings (70 mg/kg).
##This concentration was from the sample in the waste oil tank pit after UST removal.
@After soil concentrations are the maximums found after overexcavation; see Table 2.
^Grab water sample taken from open excavation
^^These are the maximum detected concentrations (all from MW3)

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: YES. A health and safety plan should be submitted prior to any digging or excavating at the site that could potentially expose construction workers or the public to residual contamination.
Should corrective action be reviewed if land use changes? YES
Monitoring wells Decommisioned: Not yet; will be when RWQCB signs off
Number Decommisioned: 0 Number Retained: 4
List enforcement actions taken: none
List enforcement actions rescinded: none

V. ADDITIONAL COMMENTS, DATA, ETC.

A leak test conducted on a 4,000-gal UST on 12/13/92 resulted in the loss of approximately 2,000 gallons of unleaded gasoline. The Port reported that "while being topped off, the UST was filled with approximately 2,000 gallons more fuel than it has capacity to hold." A ULR was submitted by the Port of Oakland. **See Figure 1** This UST was subsequently emptied of its contents.

Eight soil borings were advanced subsequent to this spill. **See Figure 2.** Groundwater was encountered between 4 to 6 feet bgs. Maximum soil concentrations detected included 2,500 mg/kg TPH-g, 85 mg/kg benzene, 390 mg/kg toluene, 75 mg/kg ethylbenzene, 400 mg/kg xylenes, 8,500 mg/kg total lead, and trace concentrations of acetone and 8270 constituents. **See Table 1.** To verify the lead concentrations, the lab analyzed soil from a different portion of the sample, and found a concentration of 4,000 mg/kg. Uribe concluded that the soils are quite heterogeneous and were probably imported as fill. The areas of anticipated contamination were outlined **in Figure 3.**

Three USTs were removed on 9/13/93, as witnessed by Alameda County (J. Eberle). The USTs included the 4,000-gal gasoline UST, 10,000-gal diesel fiberglass UST, and 500-gal waste oil UST. **Figure 4** indicates locations of tank pit, piping, and pump island samples. Maximum soil concentrations included 670 mg/kg TPHd (sample WO-1 from waste oil tank pit), 1,200 mg/kg TPH-g (pump island), and 6.6 mg/kg benzene (piping). **See Table 2.**

The pit was overexcavated and resampled in October and December 1993. **See Figure 5.** Results indicated maximum soil concentrations of 2,300 mg/kg TPH-g (pump island), 1,200 mg/kg TPH-d (waste oil UST), and 28 mg/kg benzene (pump island). **See Table 2.**

Four groundwater monitoring wells were installed in April 1994. Maximum soil concentrations included 3.04 mg/kg benzene, 1,700 mg/kg total lead, 140 mg/kg TPH-g, and 1,200 mg/kg TPH-waste oil; TPH-d was ND. **See Table 3 and Figure 6.**

Groundwater has been sampled and monitored from 4/94 through 11/95. Groundwater flow direction has been generally west, with fluctuations between W-SW and NW. MW3 has been the upgradient well, while MW1 and MW2 have been the downgradient wells. BTEX has been consistently ND in the two downgradient wells, while TPHg has been ND or at low concentrations; TPHd has usually been ND; TPHmo has been present at fairly low concentrations. However, the upgradient well has exhibited BTEX, TPHg, TPHd, and TPHmo concentrations consistently. An attempt was made to determine the source of the contamination in MW3. The Port reported no USTs within at least 100' upgradient of MW3. It is possible that the former USTs are the source of hydrocarbon contamination found in upgradient well MW3 if tidal influence exists at this site. In addition, Jennifer Eberle surveyed the site, and found no evidence of USTs within at least 100' upgradient of MW3. Pier St. appeared to be approximately 80' in width, and a paved parking lot continues on the other side of Pier St, also owned by the Port.

The maximum residual concentration of benzene (28 mg/kg in sample PI-5 at 8-10'bgs {just above gw level}) was compared to ASTM's RBCA Tier 1 RBSLs. The soil volatilization to outdoor air pathway and industrial scenario were used. The RBSL for 10-4 cancer risk is 13.25 mg/kg. Since the benzene concentration exceeds the RBSL, Tier 2 could be used. However, the average concentration of benzene in soils remaining onsite (using only detects, and not non-detects)(see asterisks in Table 2) is 3.84 mg/kg, which is less than the RBSL. Toluene, ethylbenzene, xylene, napthalene and benzo(a) pyrene concentrations are all irrelevant for this pathway, since the Tier 1 RBSLs are all "RES," which means the selected risk level is not exceeded for pure compound present at any concentration. It should be noted that MW1, located approximately 35' west (generally downgradient) from sample PI-5, has been ND for BTEX during every sample event (except a one-time hit of 0.3 ppb toluene).

The TDS concentrations in 3 of 4 wells have been >3,000 mg/L. This indicates that the groundwater is largely unusable. Lastly, this site lies approximately 675 feet from the estuary, which is a significant distance for a hydrocarbon plume to travel. The downgradient wells are ND for BTEX and TPHg. This site lies in a highly industrialized area of the Port of Oakland. There is a lot of vehicular traffic throughout the day, particularly truck traffic. Although this site will most likely continue to be used for heavy industry, the closure letter will require agency notification if there is a proposal for a change in land use, site activity, or structural configuration of the site (ie basements in new buildings where none were before). Such site modifications may require a re-evaluation of the chemical exposure pathways, receptor sensitivities (ie residential vs commercial/industrial), and/or other applicable criteria which may have been employed to assess potential human health risk during the case closure process. In addition, a health and safety plan will be required if the soil is disturbed in the area around sample PI-5 and/or MW3.

As stated above, a Tier 2 risk assessment could be done; however, its results would likely show that the residual concentrations pose no significant threat to human health. The preceding narrative explains in a qualitative manner why this case should be closed. Kevin Graves of the RWQCB was consulted by Jennifer Eberle of Alameda County (telephone conversation 5/6/96), and he agrees that this case can be closed without doing a formal Tier 2.

To summarize, the reasons that this case should be closed are as follows:

* The sources have been removed (three USTs, 2,500 gallons of water from the excavation, and 5,000 cubic yards of contaminated soil);

* The site has been adequately chacterized;

* The downgradient wells have been ND for BTEX (and <1.0 ppb benzene in MW4);

* TPH-g has been ND or at low concentrations (<100 ppb in the last 4 quarters) in the downgradient wells;

* TDS concentrations in 3 out of 4 wells have been >3,000 mg/L, indicating that the groundwater is not potentially beneficial, as per SWRCB Resolution 88-63;

* There are no sensitive human or environmental receptors in the site vicinity: the estuary lies approximately 675 feet from the site (a significant and unlikely distance for a hydrocarbon plume to travel), and the site is used as an industrial marine terminal, with constant heavy truck traffic;

* There is likely no significant risk to human health; and

* The closure letter will require **a)** agency notification if there is a proposal for a change in land use, site activity, or structural configuration of the site (ie basements in new buildings where none were before), and **b)** a health and safety plan if the soil is disturbed in the area around sample PI-5 and/or MW3.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle Title: Hazardous Materials Specialist
Signature: J Eberle Date: 7-15-96

Reviewed by
Name: Susan Hugo Title: Senior Hazardous Materials Specialist
Signature: Susan J Hugo Date: 8/7/96

Name: Tom Reacock Title: Manager
Signature: Tom Reacock Date: 7-15-96

VII. RWQCB NOTIFICATION

Date Submitted to RWQCB: 8-8-96 RWQCB Response: Approved
RWQCB Staff Name: Kevin Graves Title: AWRCE Date:
Kevin Graves 9/4/96

TABLE 1
Summary of Soil Analyses
Concentrations in mg/Kg

1993

Boring Number	B-1	B-2	B-3	B-4	B-5	B-6	B-7		B-8	
Depth	4.0	3.5	5.0	5.0	6.5	6.5	7.0		7.5	
Petroleum Hydrocarbons, EPA Method 8015 Modified										
Diesel	N/A	N/A	N/A	N/D	60 [1]	70 [1]	N/D		14	
Gas	N/D	2,500	N/D	N/A	N/A	1,300	23		N/A	
BTEX, EPA Method 8020										
Benzene	N/D	24	N/D	0.64	85	75	0.96	1.6 [2]	0.005	N/D [2]
Toluene	0.008	120	N/D	2.5	390	160	2.9	3.6 [2]	0.008	N/D [2]
Ethyl Benzene	N/D	30	0.011	0.47	75	20	0.52	0.63 [2]	N/D	N/D [2]
P,M - Xylene	N/D	110	N/D	2.0	400 270	65	2.0	2.5 [2]	N/D	N/D [2]
O - Xylene	N/D	45	0.008	0.74	130	30	0.77	0.94 [2]	N/D	N/D [2]
Metals, EPA Method 6010										
Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	2.2	ok	0.2	
Chromium	N/A	N/A	N/A	N/A	N/A	N/A	18	ok	62	
Copper	N/A	N/A	N/A	N/A	N/A	N/A	190	ok	31	
Lead	N/A	3	N/A	N/A	N/A	N/A	8,500 [3]		22	
Zinc	N/A	N/A	N/A	N/A	N/A	N/A	2,200	ok	150	
Volatile Organics, EPA Method 8240										
Acetone	N/A	N/A	N/A	N/A	N/A	N/A	0.04		N/D	
Semi-Volatile Organics, EPA Method 8270										
Benzo (a) anthracene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.2	
Benzo (b) flouranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.6	
Benzo (k) flouranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.4	
Benzo(ghi) perylene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		1.0	
Benzo (a) pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.8	
Chrysene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.3	
Flouranthene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.8	
Napthalene	N/A	N/A	N/A	N/A	N/A	N/A	0.2		N/D	
Phenanthrene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		0.4	
Pyrene	N/A	N/A	N/A	N/A	N/A	N/A	N/D		1.3	

NOTES:
1. A high level of heavier hydrocarbons also present with sample.
2. Analytical results from EPA Method 8240
3. Reanalysis of a different portion of the sample contained 4,000 mg/Kg of lead

N/D = Not detected at or above method detection limit
N/A = Not Analyzed

9-13-93

Table 2:
Summary of Laboratory Results from Excavation of Gasoline and Diesel Tanks at 1195 Maritime Street, Oakland, California
Concentrations in mg/kg

Sample Id (Date)	TPH-Gasoline	TPH-Diesel	Benzene	Toluene	Ethyl benzene	Xylenes	Lead [1]
G-1 (9/13)	<1.0	97	0.029	0.011	<0.005	0.008	21
GD-2 (9/13)	1	11	0.095	<0.005	<0.005	<0.005	13
* GD-3 (9/13)	35	52	3.2	2.9	0.580	3.3	15
* GD-4 (9/13)	16	78	3.3	2.1	0.280	1.6	13
* GD-5 (9/13)	5	41	1.7	0.30	0.060	0.270	13
GD-6 (9/13)	18	16	2.4	0.650	0.200	1.2	13
PI-1 (9/21)	50	39	3.6	4.1	0.960	7.6	na
PI-2 (9/21)	42	37	1.8	2.2	0.880	5.1	na
PI-3 (9/21)	1,200	370 [2]	4.0	66.0	20.0	140.0	na
T-1 (9/21)	64	110	1.2	3.2	0.470	4.5	na
T-2 (9/21)	890	9,000	6.6	25.0	3.0	21.0	na
T-3 (9/21)	3	4	<0.005	0.053 [3]	0.006 [3]	0.360	na
* WO-6 (10/4)	5	1	0.670	0.080	<0.030	0.210	<5.0
* WO-7 (10/4)	<1.0	13	<0.005	<0.005	<0.005	<0.005	8.6
* GD-8 (10/5)	<1.0	<2.0	<0.005	<0.005	<0.005	<0.005	<5.0
* T-4 (10/5) 8'	<1.0	11	<0.005	<0.005	<0.005	<0.005	<5.0
* T-5 (10/11)	<1.0	22	0.160	<0.005	<0.005	<0.005	11
* T-6 (10/11)	5	<2.0	0.480	0.210	<0.030	0.060	<5.0
* PI-4 (10/11)	<1.0	<2.0	0.051	0.200	0.021	0.120	<4.9
PI-5 (10/11)	2,300	110	28.0	140.0	30.0	160.0	10
* PI 6-8.0 (12/1)	2	<1	0.31	0.018	0.068	0.082	na
* PI-7-4.5 (12/1)	190	11	0.57	4.9	2.8	15	na

[1] *Total lead*

[2] *Quantified as Kerosene due to overlap of hydrocarbon ranges.*

[3] *Presence of this compound confirmed by second column; however, the confirmation concentration differed from the reported result by more than a factor of two.*

na = not analyzed

*Conc. remaining in place

Table 2:
Summary of Laboratory Results
from Excavation of Waste Oil Tank
at 1195 Maritime Street, Oakland, California
Concentrations in mg/kg

Constituent	Sample Id 8' dates	WO-1 9/13	* WO-2 9/29	* WO-3 9/29	* WO-4 10/4	* WO-5 10/4
TPH-Diesel		670	42	35	17	1,200
Oil & Grease		4,800	<50	160	na	na
TPH-Gasoline		6	<1.0	<1.0	1	250
Benzene		0.180	<0.005	<0.005	0.200	4.7
Toluene		0.390	<0.005	<0.005	0.089	16
Ethyl benzene		0.110	<0.005	<0.005	0.011	3.7
Xylenes		0.720	<0.005	<0.005	0.041	20
Metals	STLC					
Antimony		3	<3.0	<3.0	na	na
Arsenic		3	<2.5	<2.4	na	na
Beryllium		330	0.32	0.40	na	na
Barium		0.4	54	62	na	na
Cadmium	1.0	1.1	<0.25	<0.25	na	na
Chromium	5.	46	47	57	na	na
Cobalt		8.1	9.3	12	na	na
Copper		26	26	21	na	na
Lead		43	14	13	17	500
Mercury		<0.1	0.13	0.12	na	na
Molybdenum		1.1	1.2	0.87	na	na
Nickel	20	44	51	60	na	na
Selenium		<3	<2.5	<2.4	na	na
Silver		<0.5	<0.49	<0.5	na	na
Thallium		<3	<2.5	<2.4	na	na
Vanadium		33	31	34	na	na
Zinc	250	370	46	61	na	na
EPA 8240						
Chloromethane		<0.050	<0.010	<0.010	na	na
Bromomethane		<0.050	<0.010	<0.010	na	na
Vinyl Chloride		<0.050	<0.010	<0.010	na	na
Chloroethane		<0.050	<0.010	<0.010	na	na
Methylene chloride		<0.090	<0.020	<0.020	na	na
Acetone		0.250	<0.020	0.040	na	na
Carbon disulfide		<0.020	(0.016) [1] <0.005	0.014	na	na

Notes:
[1] *Constituent detected below the detection limit, the value in parenthesis is an estimate.*
na = not analyzed

* conc. remaining in place

Table # 3

Analytical Results: BTEX and Total Lead in Soil Samples
1195 Maritime Street, Oakland, California
(Concentrations in mg/kg)

Sample #	Depth (ft)	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	Total Lead
MW-1-5.0	5.0	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(7.5)
MW-2-5.0	5.0	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(7.5)
MW-3-6.0	6.0	3.04	19	5.9	29	1,700
MW-4-5.0	5.0	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	13

Notes:

All samples collected on April 19, 1994
ND() = Not detected at or above the indicated laboratory method detection/reporting limit

3

Table 4, Continued

Analytical Results: TPH in Soil Samples
1195 Maritime Street, Oakland, California
(Concentrations in mg/kg)

Sample #	Depth (ft)	TPH-G	TPH-MS	TPH-JF	TPH-K	TPH-D	TPH-WO
MW-1-5.0	5.0	ND(0.2)	ND(5)	ND(5)	ND(5)	ND(5)	ND(50)
MW-2-5.0	5.0	ND(0.2)	ND(5)	ND(5)	ND(5)	ND(5)	ND(50)
MW-3-6.0	6.0	140	ND(5)	ND(5)	ND(5)	ND(5)	1,200
MW-4-5.0	5.0	ND(0.2)	ND(5)	ND(5)	ND(5)	ND(5)	69

Notes:

All samples collected on April 19, 1994
ND() = Not detected at or above the indicated laboratory method detection/reporting limit
TPH-G = Total petroleum hydrocarbons as gasoline
TPH-MS = Total petroleum hydrocarbons as mineral spirits
TPH-JF = Total petroleum hydrocarbons as jet fuel
TPH-K = Total petroleum hydrocarbons as kerosene
TPH-D = Total petroleum hydrocarbons as diesel
TPH-WO = Total petroleum hydrocarbons as waste oil

4

TABLE 4 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING
PORT OF OAKLAND, BERTH 23
1195 MARITIME STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-254

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	TPH-MO (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	Total Lead (ug/l)	Dissolved Lead (ug/l)	TDS (mg/l)	LAB
MW-1	04/29/94	11.73	7.80	3.93	ND<50	1000	ND<500	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<150	—	4200	—
MW-1	06/17/94	11.73	7.95	3.78	ND<50	—	ND<500	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<150	—	12000	—
MW-1	10/06/94	11.73	7.90	3.83	ND<50	ND<50	1200	ND<0.4	ND<0.3	ND<0.3	ND<0.4	ND<50	ND<50	8400	D&M
MW-1	02/22/95	11.73	7.45	4.28	ND<50	ND<50	550	ND<0.4	0.3	ND<0.3	ND<0.4	ND<50	—	830	CEC
MW-1	05/24/95	11.73	7.32	4.41	ND<50	ND<50	500	ND<0.4	ND<0 3	ND<0.3	ND<0.4	—	—	3300	CEC
MW-1	08/30/95	11.73	7.35	4.38	ND<50	ND<90	600	ND<0.4	ND<0.3	ND<0.3	ND<0.4	—	—	4300	CEC
MW-1	11/15/95	11.73	7.50	4.23	ND<50	65	400	ND<0.4	ND<0 3	ND<0.3	ND<0.4	—	—	9100	CEC
MW-2	04/29/94	11.79	8.15	3.64	ND<50	120	ND<500	ND<0.5	ND<0 5	ND<0.5	ND<0.5	ND<150	—	10000	—
MW-2	06/17/94	11.79	8.22	3.57	ND<50	—	ND<500	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<150	—	19000	—
MW-2	10/06/94	11.79	8.07	3.72	530	ND<1000	2300	ND<0.4	ND<0.3	ND<0.3	ND<0.4	ND<50	ND<50	7700	D&M
MW-2	02/22/95	11.79	7.42	4.37	ND<50	ND<50	680	ND<0.4	ND<0.3	ND<0.3	ND<0.4	ND<50	—	13000	CEC
MW-2	05/24/95	11.79	7.19	4.60	90	ND<50	800	ND<0.4	ND<0.3	ND<0.3	ND<0.4	—	—	10000	CEC
MW-2	08/30/95	11.79	7.27	4.52	ND<50	ND<100	600	ND<0.4	ND<0.3	ND<0.3	ND<0.4	—	—	11000	CEC
MW-2	11/15/95	11.79	7.44	4.35	ND<50	180	1000	ND<0.4	ND<0 3	ND<0.3	ND<0.4	—	—	16000	CEC
MW-3	04/29/94	12.36	7.61	4.75	29000	690	890	810	740	106	370	ND<150	—	870	—
MW-3	06/17/94	12.36	8.17	4.19	4200	—	790	660	230	40	290	320	—	2100	—
MW-3	10/06/94	12.36	8.02	4.34	12000	ND<500	1700	910	500	39	450	60	ND<50	2400	D&M
MW-3	02/22/95	12.36	6.81	5.55	8000	1100	2100	1400	920	270	1160	ND<50	—	1100	CEC
QC-1 (c)	02/22/95	12.36	—	—	3800	—	—	710	70	ND<0.3	520	—	—	—	CEC
MW-3	05/24/95	12.36	6.76	5.60	12000	400	700	1200	500	210	810	ND<50	—	1300	CEC
MW-3	08/30/95	12.36	7.36	5.00	10000	960	1600	900	100	100	274	ND<50	—	1100	CEC
QC-1 (c)	08/30/95	—	—	—	9700	—	—	820	99	89	244	—	—	—	CEC
MW-3	11/15/95	12.36	7 63	4.73	6700	1100	2600	610	26	85	145	ND<50	—	2300	CEC
QC-1 (c)	11/15/95	—	—	—	6600	—	—	600	25	84	144	—	—	—	CEC
MW-4	04/29/94	12.93	8.20	4.73	ND<50	290	ND<500	ND<0.5	ND<0.5	ND<0 5	ND<0.5	ND<150	—	3600	—
MW-4	06/17/94	12.93	7.72	5.21	ND<50	—	980	ND<0.5	ND<0.5	ND<0.5	0.92	ND<150	—	5100	—
MW-4	10/06/94	12.93	8.48	4.45	ND<50	1600	1700	ND<0.4	ND<0.3	ND<0 3	ND<0.4	ND<50	ND<50	14000	D&M
MW-4	02/22/95	12.93	7.13	5.80	70	430	980	0.9	0.4	ND<0.3	1.7	ND<50	—	2500	CEC
MW-4	05/24/95	12.36	7.08	5.28	ND<50	280	600	0.7	ND<0 3	ND<0.3	ND<0.4	—	—	4500	CEC
QC-1 (c)	05/24/95	12.36	—	—	ND<50	—	—	0.8	ND<0.3	ND<0.3	ND<0.4	—	—	—	CEC
MW-4	08/30/95	12.36	7.67	4.69	ND<50	540	1100	0.5	ND<0.3	ND<0.3	ND<0 4	—	—	3200	CEC
MW-4	11/15/95	12.36	8.07	4.29	ND<50	300	1000	ND<0 4	ND<0.3	ND<0 3	ND<0.4	—	—	9200	CEC
QC-2 (d)	05/24/95	—	—	—	ND<50	—	—	ND<0.4	ND<0.3	ND<0.3	ND<0.4	—	—	—	CEC
QC-2 (d)	08/30/95	—	—	—	ND<50	—	—	ND<0.4	ND<0.3	ND<0.3	ND<0.4	—	—	—	CEC
QC-2 (d)	11/15/95	—	—	—	ND<50	—	—	ND<0.4	ND<0.3	ND<0.3	ND<0.4	—	—	—	CEC

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel (C10 to C20)
TPH-MO	Total petroleum hydrocarbons as motor oil (C20 to C42)
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
TDS	Total dissolved solids
ug/l	Micrograms per liter
mg/l	Milligrams per liter
—	Not analyzed/applicable/available
ND	Not detected above reported detection limit
D&M	D&M Laboratories
CEC	Clayton Environmental Consultants

NOTES:

(a) Top of casing elevations surveyed to the nearest 0.01 foot relative to mean lower low water (3.2 feet below mean sea level), Port of Oakland Datum.

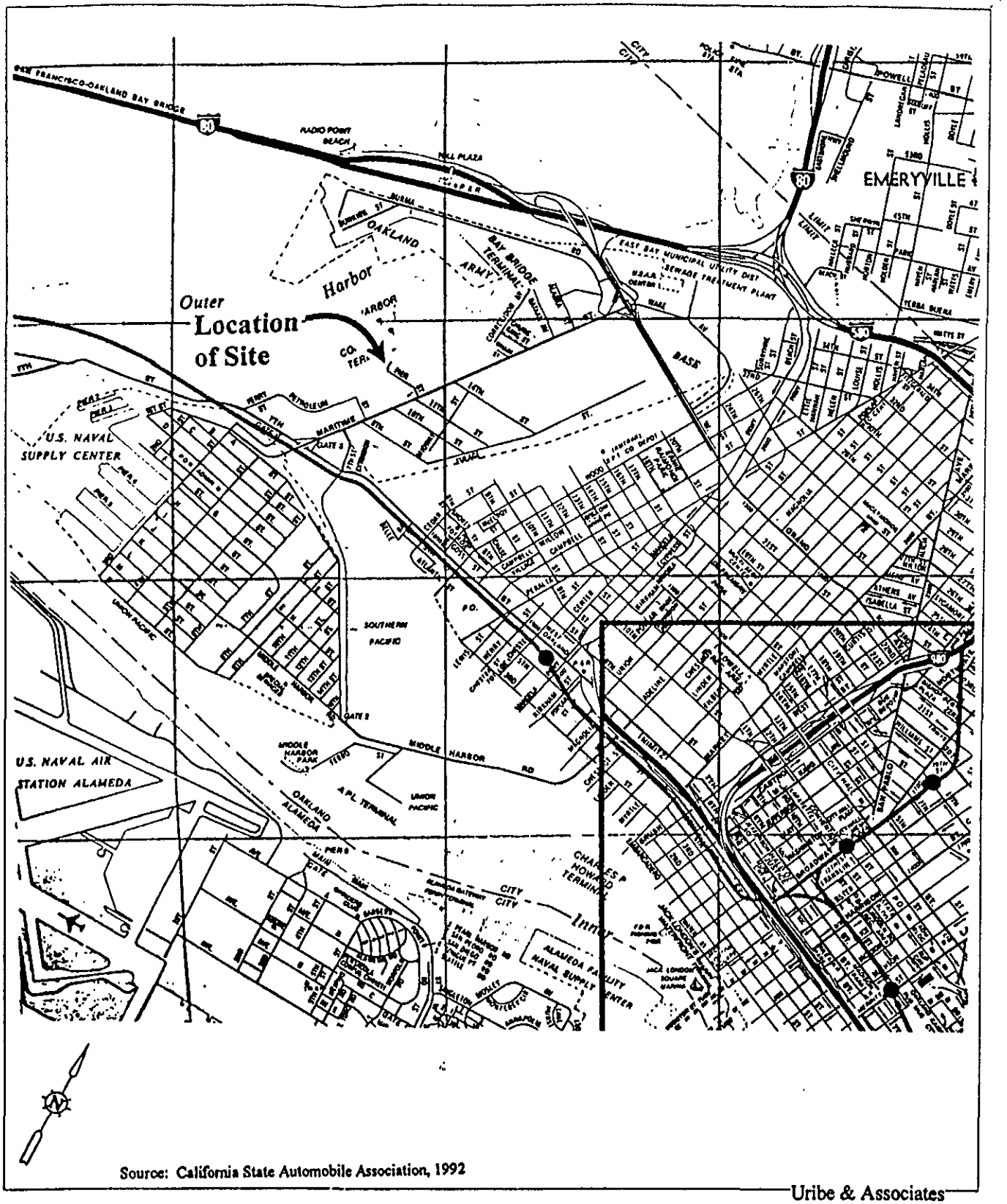
(b) Groundwater elevations expressed in feet above mean lower low water.

(c) Blind duplicate.

(d) Travel blank.

E:\0\10-254\254-1-4.WQ2

21-Dec-95



Source: California State Automobile Association, 1992

Uribe & Associates

Figure 1: Site Location Map

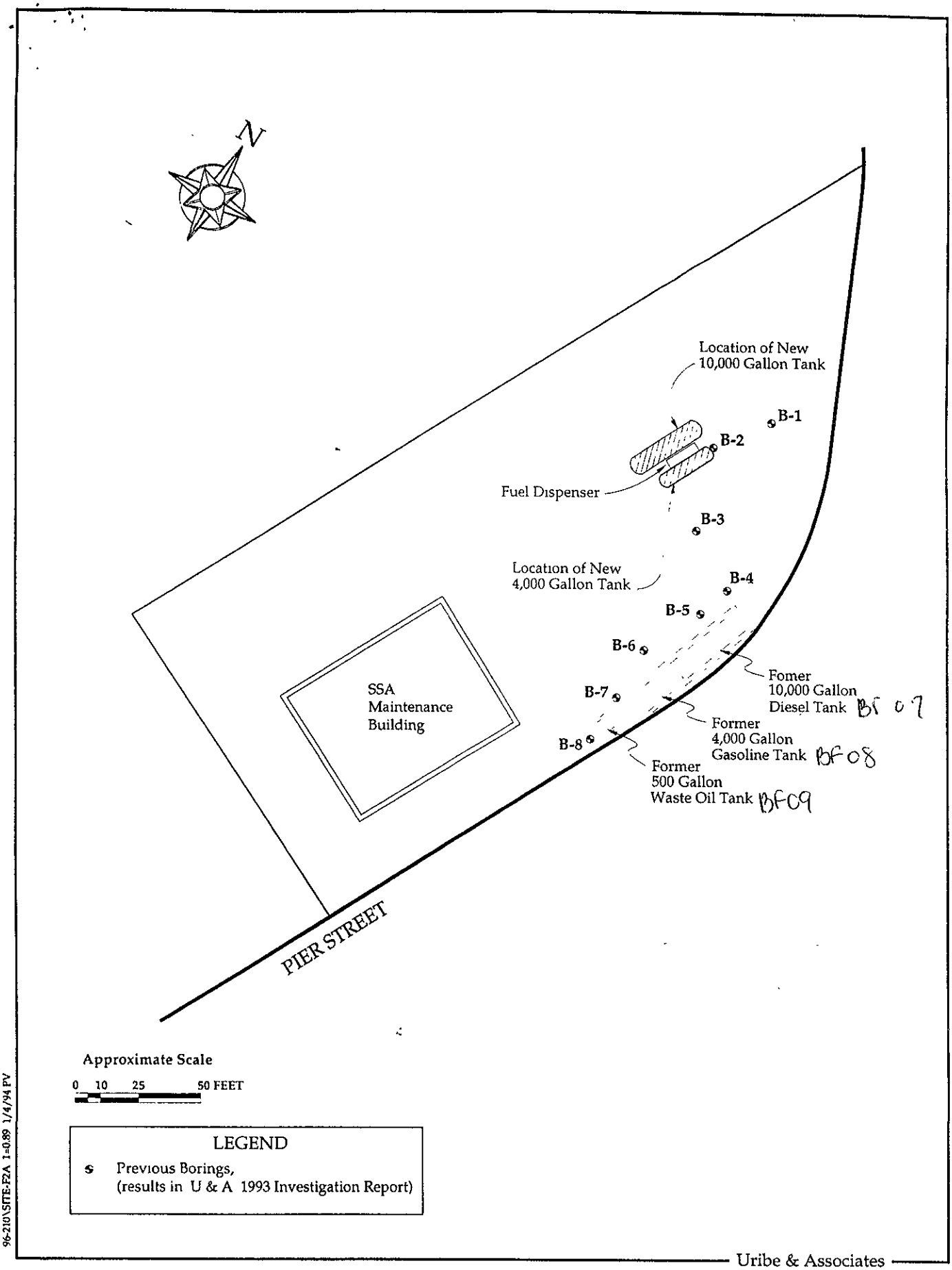


Figure 2: Site Plan, 1195 Maritime Street, Oakland, California

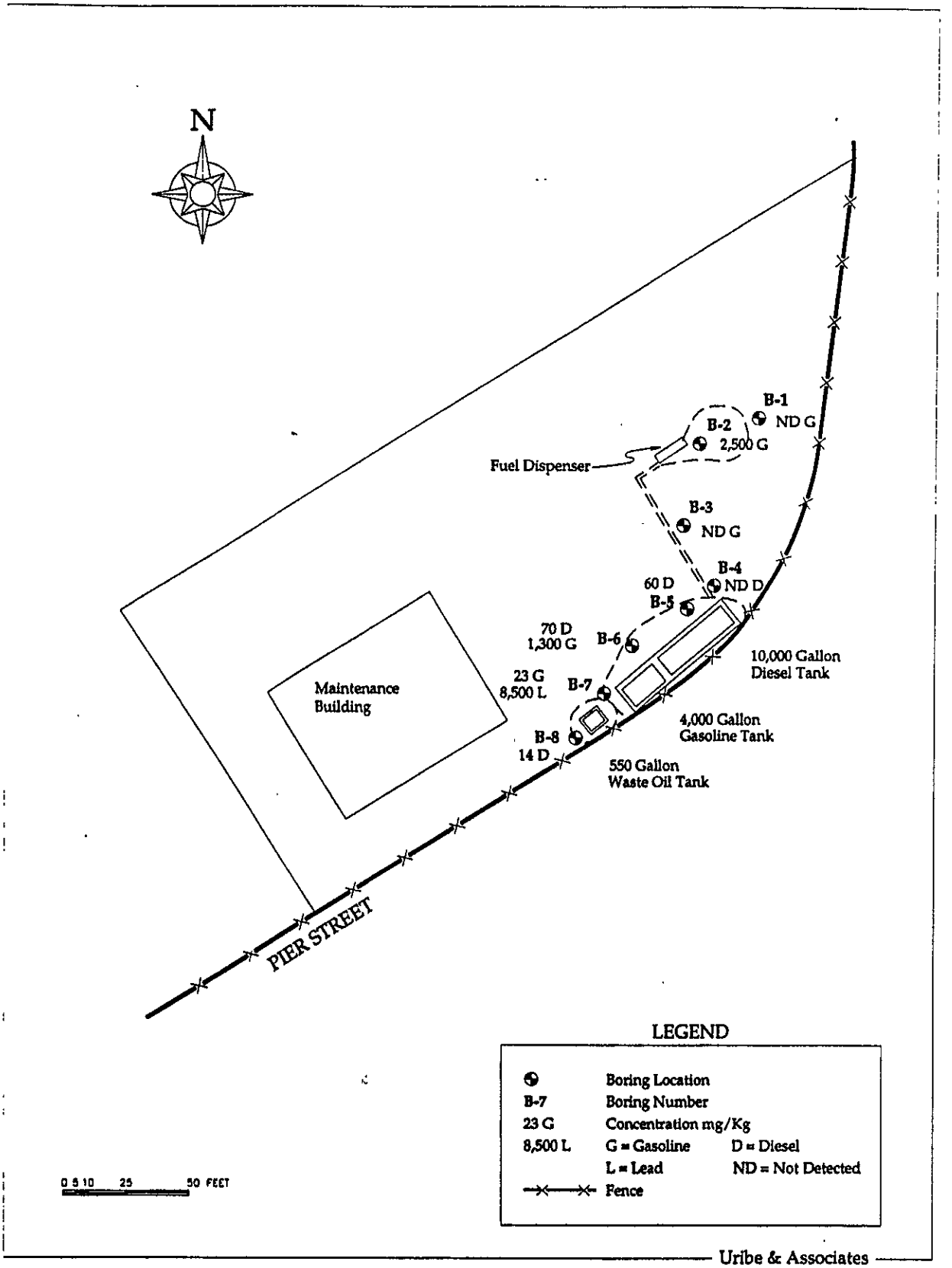


Figure 3: Location of Potentially Contaminated Soils

% benz in gas.

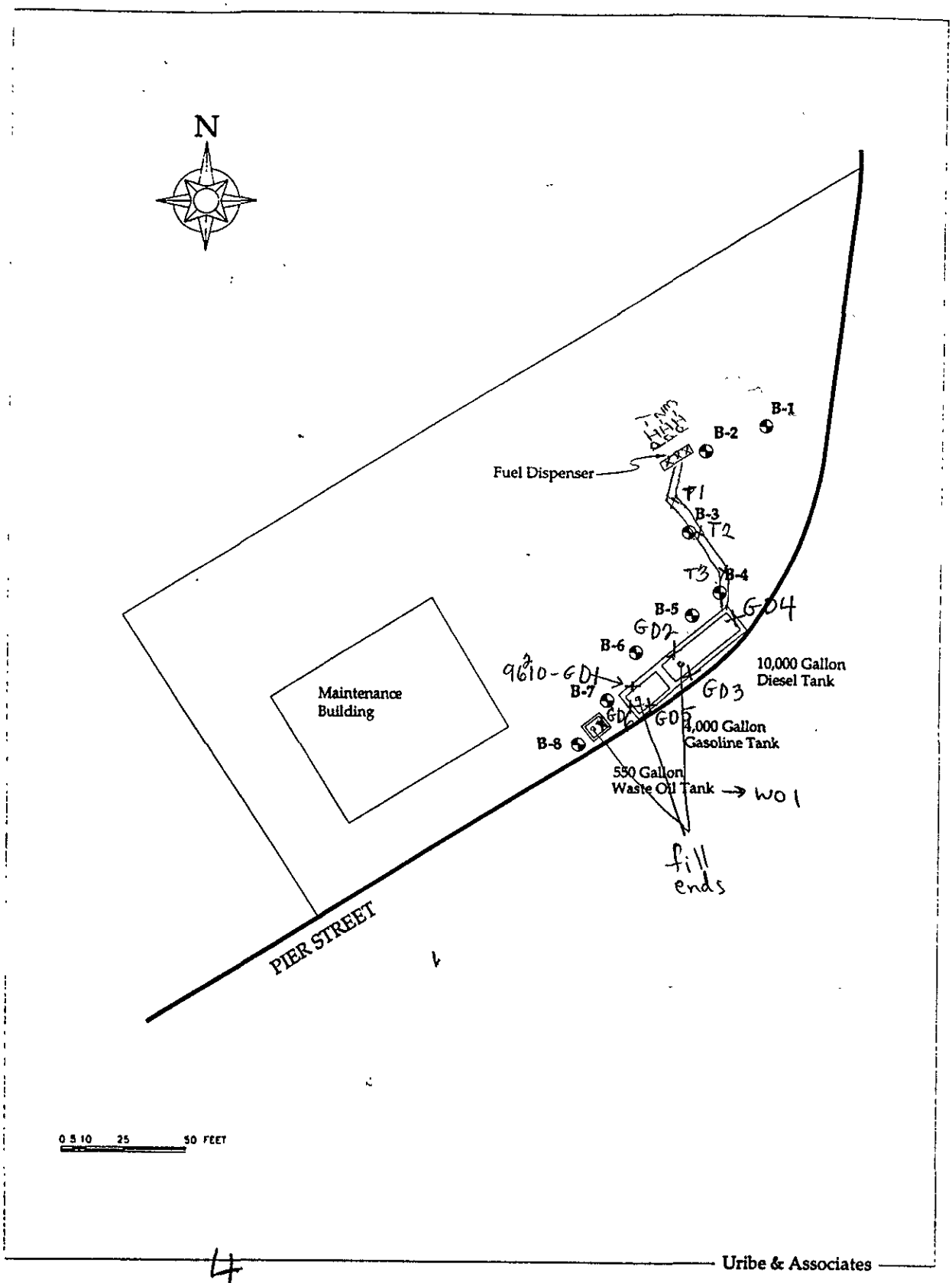


Figure 4: Site Map of Stevedoring Services of America, and Exploratory Soil Boring Locations

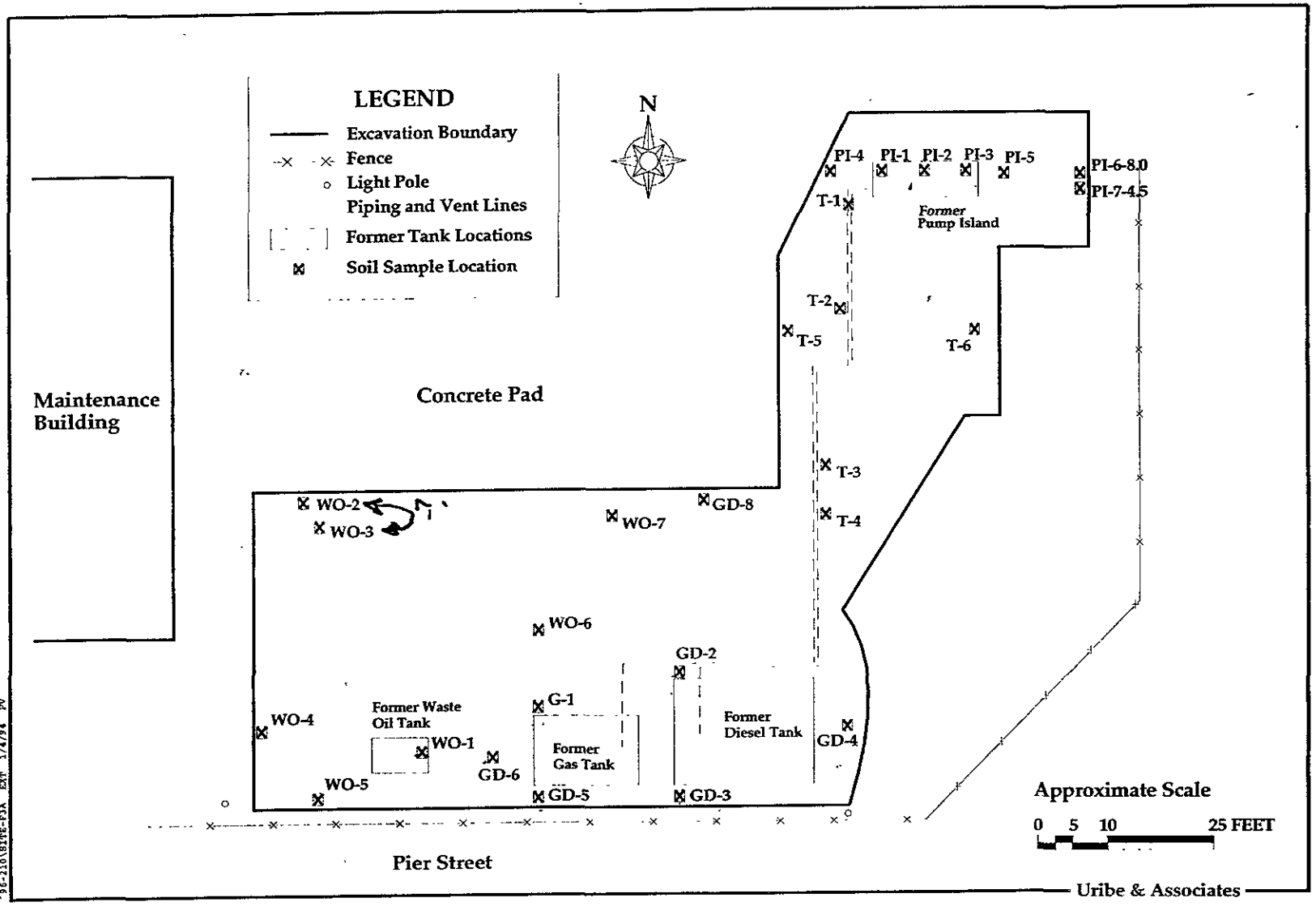


Figure 5: Site Plan with Extent of Excavation and Sample Locations
1195 Maritime, Oakland, California

I thought WO3 was a wall & WO2 was a bottom.

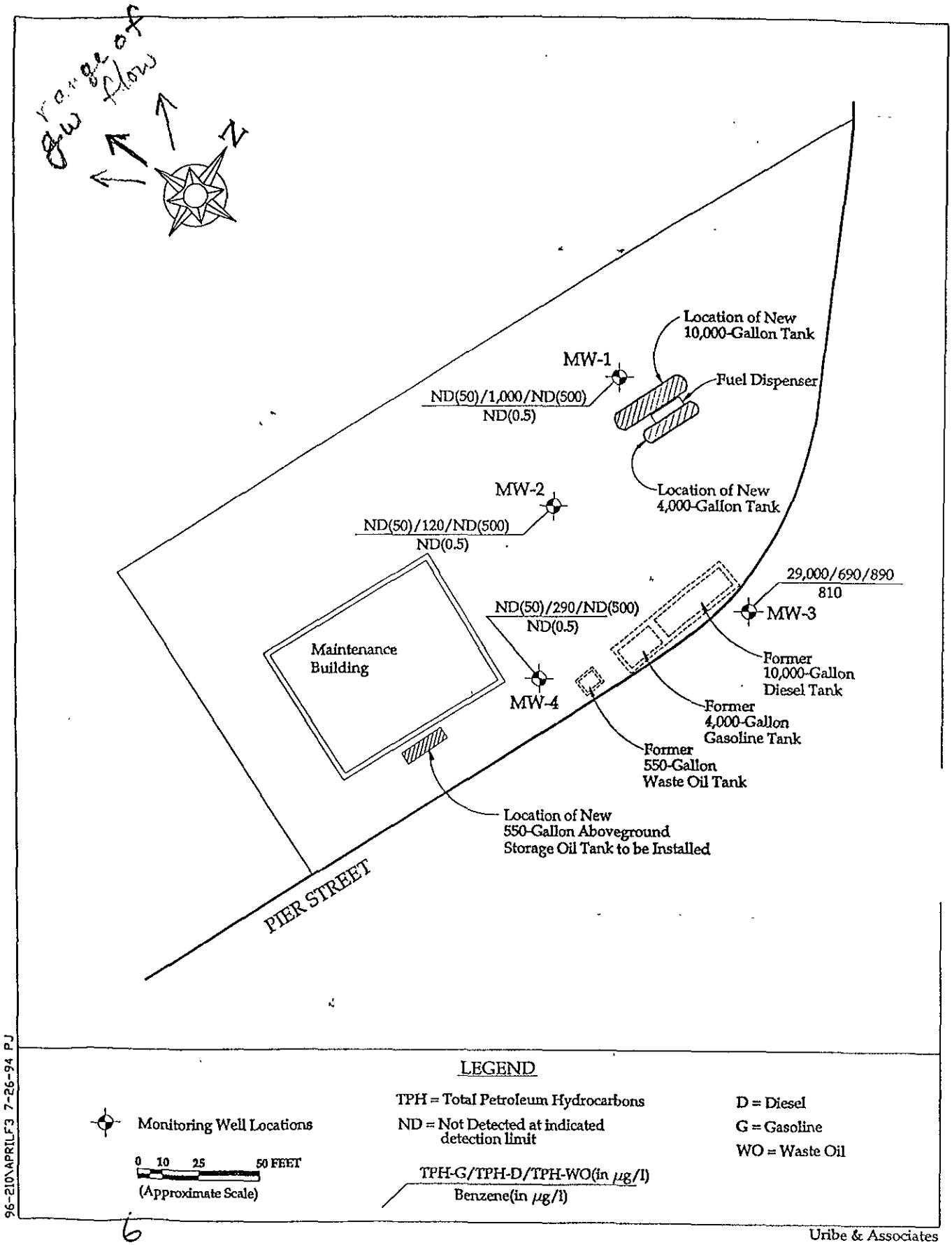


Figure 3: Distribution Map of TPH (as Gasoline, Diesel, and Waste Oil) and Benzene in Groundwater - April 29, 1994 - 1195 Maritime Street, Oakland, California