



DAVID J. KEARS, Agency Director

September 10, 1996

STID 3782

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

REMEDIAL ACTION COMPLETION CERTIFICATION

Port of Oakland  
530 Water Street,  
Oakland, CA 94607  
Attn: Neil Werner

CFS Corporation  
5110 7th Street,  
Oakland, CA 94607  
Attn: Bill Niland

RE: CFS CORPORATION, 5110 7TH STREET, OAKLAND, CA 94607

Dear Messers. Werner and Niland,

This letter confirms the completion of site investigation and remedial action for one 1,000-gallon diesel underground storage tank at the above described location. Enclosed is the Case Closure Summary for the referenced site for your records.

Based upon the available information, including current land use, and with 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. **However, upon future repaving of this facility, groundwater monitoring wells MW-1 and MW-2 are to be located and properly abandoned.**

This notice is issued pursuant to the regulation contained in Title 23, Division 3, Chapter 16, Section 2721 (e) of the California Code of Regulations. (If a change in land use is proposed, the owner must promptly notify this agency.)

Please contact Dale Klettke at (510) 567-6880 if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung, Director, Department of Environmental Health

c: Gordon Coleman, Acting Chief, Environmental Protection Division--files  
Kevin Graves, RWQCB  
Lori Casias, SWRCB  
Dale Klettke--files

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QUALITY CONTROL BOARD  
**CASE CLOSURE SUMMARY**  
**Leaking Underground Fuel Storage Tank Program**

**I. AGENCY INFORMATION**

Date: January 2, 1996

Agency name: Alameda County-HazMat Address: 1131 Harbor Bay Pkwy  
 City/State/Zip: Alameda, CA 94502 Phone: (510) 567-6700  
 Responsible staff person: D. Klettke Title: Haz. Materials Spec.

**II. CASE INFORMATION**

Site facility name: CFS Corporation  
 Site facility address: 5110 7th Street, Oakland, CA 94607  
 RB LUSTIS Case No: N/A Local Case No./LOP Case No.: 3782  
 URF filing date: 2/19/90 SWEEPS No: N/A

Responsible Parties: Addresses: Phone Numbers:  
 Neil Werner c/o Port of Oakland, 530 Water Street, Oakland, CA 94607  
 (510) 272-1100  
 Bill Niland c/o CFS Corporation, 5110 7th Street, Oakland, CA 94607  
 (510) 834-9620

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	1000	diesel	removed	2/13/1990

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and type of release: holes observed in vent end of tank  
 Site characterization complete? YES  
 Date approved by oversight agency: July 7, 1993  
 Monitoring Wells installed? YES Number: 3  
 Proper screened interval? YES, 9.5' to 19.5' bgs (MW-1). 10.0' to 20.0' bgs (MW-2 and MW-3)  
 Highest GW depth below ground surface: 8.01' bgs on 2/2/93 Lowest depth: 10.05' bgs on 11/17/93  
 Flow direction: Predominantly south-southwest (8/30/94, 3/7/95, 5/31/95) but varies from southeast (1/28/94), to west-northwest (2/16/94 and 5/24/94).  
 Most sensitive current use: undetermined  
 Are drinking water wells affected? NO Aquifer name: N/A  
 Is surface water affected? NO Nearest affected SW name: N/A  
 Off-site beneficial use impacts (addresses/locations): N/A

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:**

<u>Material</u>	<u>Amount (include units)</u>	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tank	1-1000 gallon	disposal/H & H Ship	2/13/1990
Piping	UNK	disposal/H & H Ship	2/13/1990
Free Product			
Soil	20 cubic yards	disposal/Forward Landfill	UNK
Soil	20 cubic yards	disposal/Redwood Landfill	UNK
Groundwater Barrels			
Tank contents*	150 gallons	disposal/H & H Ship	2/21/1990

\*Tank contents consisted of approximately 20 gallons residual product and 130 gallons of rainwater

**Maximum Documented Contaminant Concentrations - - Before and After Cleanup**

<u>Contaminant</u>	<u>Soil (ppm)</u>		<u>Water (ppb)</u>	
	<u>Before</u>	<u>After</u>	<u>Before</u>	<u>After</u>
TPH (Gas)	NA	NA	NA	NA
TPH (Diesel)	73	690	NA	NA
TPH (kerosene)	<1	<1	NA	NA
TPH (motor oil)	NA*	NA*	NA*	12000
Benzene	0.310	0.650	<0.4	<0.4
Toluene	0.042	0.400	<0.3	<0.3
Ethyl benzene	0.030	0.006	<0.3	<0.3
Xylenes	0.780	4.90	<0.4	<0.4
Oil & Grease	NA	NA	NA	NA
Heavy metals - lead	NA	NA	NA	NA
Other-TDS	NA	NA	range 4700-20,000 ppm	

\*Note: Original samples were not analyzed for TPHmo, but were later quantified due to the petroleum hydrocarbons found in the C24 to C50 range.

**Comments (Depth of Remediation, etc.):**

A 1000-gallon underground storage tank (UST) previously containing diesel, was removed from the site on February 13, 1990. Aqua Science Engineers of San Ramon performed the tank removal and BASELINE performed the soil sampling. During tank removal, holes in the vent end of the tank, petroleum odors, and soil discoloration were observed. Following tank removal, two soil samples were collected from beneath the tank, one from the fill end and the other soil sample collected from the vent end of the diesel UST. Soil samples were analyzed for total extractable hydrocarbons (TEH) by EPA Method 8015M and for BTEX by EPA Method 8020. Analytical results of the soil samples collected from the fill end collected at a depth of 6.5' bgs detected diesel (73 mg/kg), benzene (0.092 mg/kg), and total xylene isomers (0.78 mg/kg) in the native soil beneath the tank. Analytical results of the soil samples collected from the vent end at a depth of 6.5' bgs detected diesel (24

mg/kg), benzene (0.310 mg/kg), toluene (0.042 mg/kg), ethyl benzene (0.030 mg/kg) and total xylene isomers (0.110 mg/kg) in the native soil beneath the tank.

On February 15, 1990, BASELINE conducted additional soil excavations and performed verification sampling. Discolored soils were removed from the former tank excavation. However, excavation was constrained to the east by the existing building and a water line, to the north and west by underground utilities, and to the south by a fence and an aboveground propane tank. Approximately twenty (20) cubic yards of soil were removed from the excavation, with the final dimensions of the excavation being approximately 14 feet by 20 feet by 10 feet deep. Verification soil samples were collected in the sidewalls at a depth of about 7.5' bgs and at the bottom of the excavation at a depth of 9.0' bgs.

The verification soil sample collected from the south wall (C-S Wall) contained 37 mg/kg diesel and 0.053 mg/kg total xylenes. The verification soil sample collected from the east wall (C-E Wall) contained TPHd (11 mg/kg), benzene (0.018 mg/kg), toluene (0.023 mg/kg), ethyl benzene (0.006 mg/kg) and total xylenes (0.180 mg/kg). The verification soil sample collected from the west wall (C-W Wall) contained TPHd (370 mg/kg), benzene (0.650 mg/kg), toluene (0.400 mg/kg), and total xylenes (4.90 mg/kg). The verification soil sample collected from the north wall (C-N Wall) contained 5 mg/kg diesel. The verification soil sample collected from the bottom of the excavation (C-Bottom) contained 690 mg/kg diesel and ND for BTEX. See Table 1- Summary of Analytical Results Soils.

One soil boring was advanced to an approximate depth of 19.5' bgs and subsequently converted to an two-inch-diameter groundwater monitoring well (MW-1) on April 9, 1993. The boring encountered fill, including metal debris, asphalt and tar, which were underlain by bay muds. Groundwater was first encountered at a depth of approximately 8' to 10' bgs. Soil samples collected from the boring were analyzed for TPHd and BTEX at depths of 4.0', 9.0', 12.0', 16.0', 17.5' and 19.5' bgs. Laboratory analysis of these soil samples detected concentrations of TPHd of 68 mg/kg, 600 mg/kg, 150 mg/kg, 79 mg/kg, 110 mg/kg and 17 mg/kg, respectively. However, the laboratory reported that all of the samples had heavier hydrocarbons than diesel, in the C20 to C50 range; BTEX was not detected (<0.005 mg/kg) in any of the soil samples. Based on these results, it is likely that asphalt-range heavy petroleum compounds are a common contaminant of the fill material.

Two soil borings were advanced and subsequently converted to groundwater monitoring wells (MW-2 and MW-3) on December 6, 1993. Soil samples collected from the borings were analyzed for TPHd and BTEX. Laboratory analysis of these soil samples detected concentrations of TPHd ranging from 4 mg/kg to 240 mg/kg in boring MW-2 and from 3 mg/kg to 380 mg/kg in boring MW-3. Maximum concentrations of TPHd were found at a depth of 11.0' bgs in soil boring MW-2 and 10.0' bgs in soil boring MW-3. Only benzene was detected in the soil boring (0.013 mg/kg) collected from MW-2 at a depth of 1.5' bgs.

**See Section VII, Additional Comments, etc...**

**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? **YES**  
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? **YES**  
Does corrective action protect public health for current land use? **YES**  
Site management requirements: **None**

Should corrective action be reviewed if land use changes? **YES**  
Monitoring wells Decommissioned: **None**  
Number Decommissioned: **N/A** Number Retained: **3**  
List enforcement actions taken: **None**

List enforcement actions rescinded: **N/A**

**V. LOCAL AGENCY REPRESENTATIVE DATA**

Name: **Dale H. Klettke** Title: **Haz Mat Specialist**  
Signature: *Dale H. Klettke* Date: *1-2-96*  
Reviewed by

Name: **Barney Chan** Title: **Haz Mat Specialist**  
Signature: *Barney Chan* Date: *1-2-96*

Name: **Thomas Peacock** Title: **Sup. Haz Mat Specialist**  
Signature: *Thomas Peacock* Date: *1-3-96*

**VI. RWQCB NOTIFICATION**

Date Submitted to RB: *9/1* RB Response: *Approved*  
RWQCB Staff Name: **Kevin Graves** Title: **AWRCE**  
Signature: *Kevin Graves* Date: *1/31/95*

**VII. ADDITIONAL COMMENTS, DATA, ETC.**

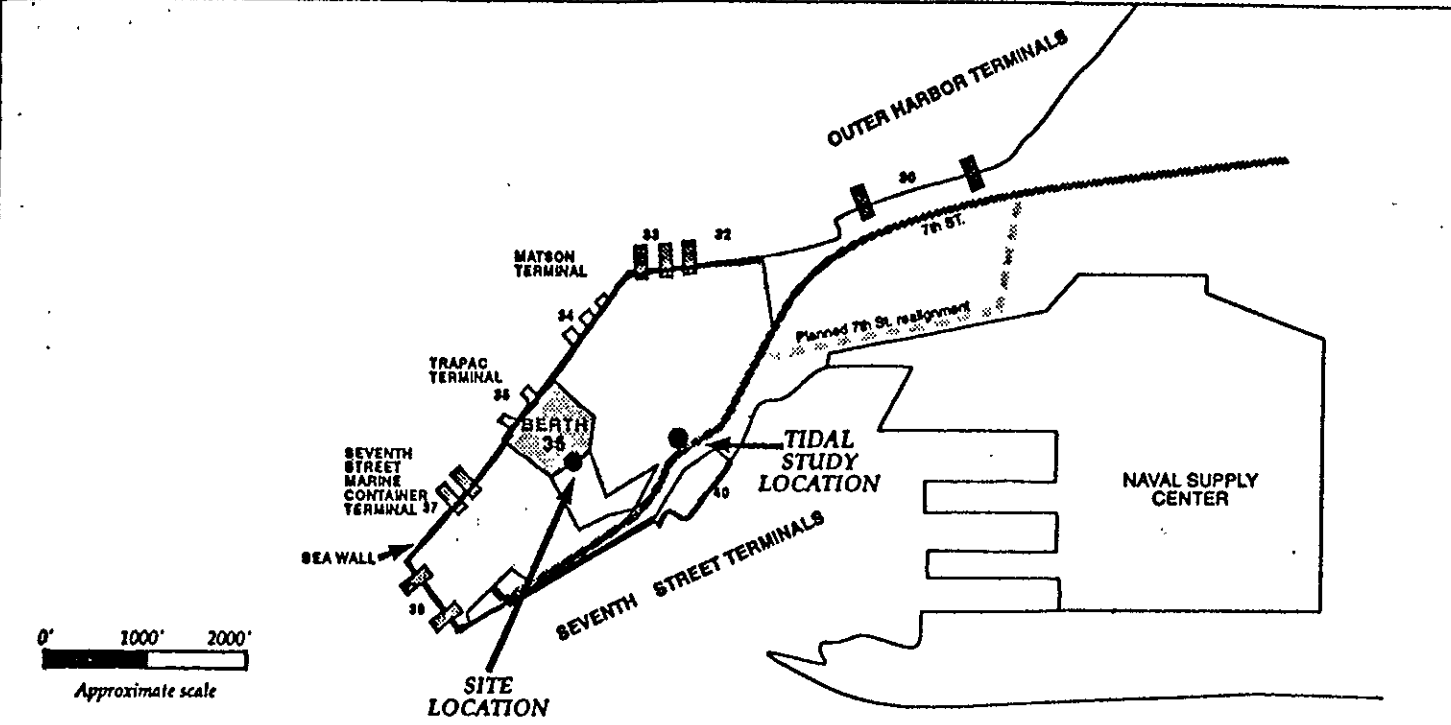
The initial groundwater sample collected from MW-1 was analyzed for TPHd and BTEX. Analytical results detected approximately 3.7 mg/l of TPHd and non-detectable concentrations of BTEX. Due to the fact that the QA/QC matrix spike for the TPH as diesel sample was not within acceptable limits, the reported concentration of 3.7 mg/l should be considered an estimate. In addition, only a portion of the hydrocarbons detected were in the diesel range, i.e. C10 to C24, with the bulk of the hydrocarbons occurring in the C20 to C45 range; BTEX was

not detected in the groundwater sample collected from MW-1. Conductivity measurements of the groundwater sample collected from MW-1 indicate that the groundwater is brackish and non-potable.

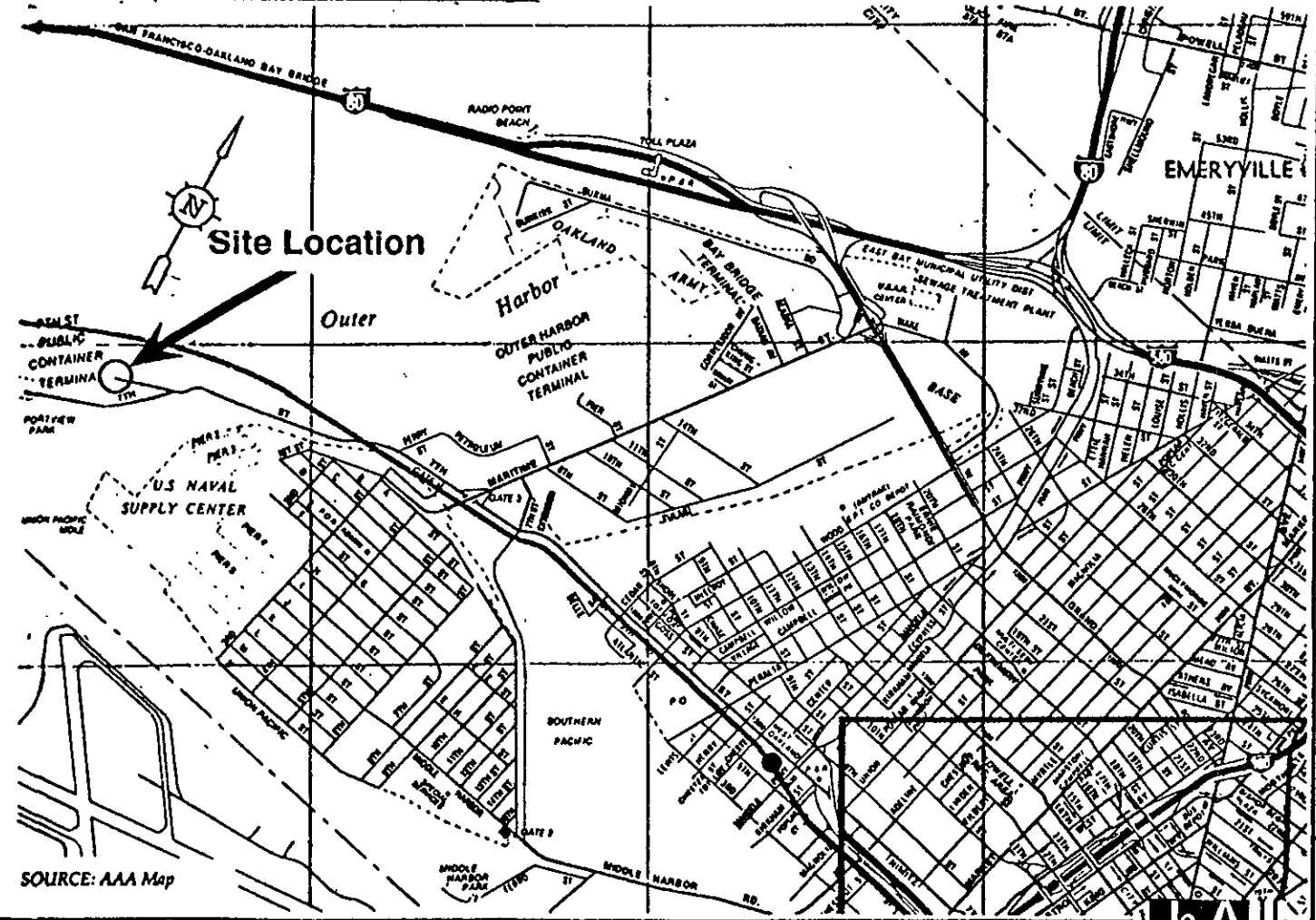
Groundwater samples collected from the two (2) newly installed monitoring wells (MW-2 and MW-3) detected 2.3 mg/l and 1.3 mg/l of TPHd, respectively; No BTEX was detected in the groundwater samples collected from monitoring wells MW-2 and MW-3. Depth to groundwater was initially measured at 8.01' bgs and 9.09' bgs in monitoring wells MW-2 and MW-3, respectively. The estimated groundwater flow was calculated to be in a southeasterly direction with a gradient of 0.027 ft/ft for the January 28, 1994 groundwater sampling event.

Groundwater sampling has occurred in all three (3) monitoring wells for a total of six consecutive quarters. During these six sampling events, groundwater flow direction has varied from southeast to west-northwest. This site is located within 500 feet of the outer harbor and groundwater flow direction may be tidally influenced.

Groundwater has been monitored on this site since April 16, 1993 (MW-1) and January 28, 1994 (MW-2 and MW-3). Except for sporadic hits of BTEX (all concentrations are equal to or less than 1 ppb), which are at or below the primary drinking MCLs, the only consistent concentrations of groundwater contaminants are TPHd and TPHmo. In addition, the groundwater in the vicinity of this site is brackish, and is not a viable source of drinking water (TDS values range from 4700-20,000 mg/l). Therefore, continued groundwater monitoring is not warranted, and this site qualifies for closure.



inset detail above



PREPARED BY URIBE & ASSOCIATES



Figure 1: Site Location Map - 5110 7th Street, Berth 35

TABLE 1  
 SUMMARY OF ANALYTICAL RESULTS, SOILS  
 5110 7th Street, Oakland  
 (mg/kg)

Sample ID No.	Date	Depth (feet)	Diesel <sup>1</sup>	Benzene <sup>2</sup>	Toluene <sup>2</sup>	Total Xylenes <sup>2</sup>	Ethylbenzene <sup>2</sup>
<u>Tank Excavation</u>							
C-F End	02/14/90	6.5	73	0.092	ND	0.780	ND
C-V End	02/14/90	6.5	24	0.310	0.042	0.110	0.030
<u>Verification</u>							
C-S Wall	02/15/90	7.5	37	ND	ND	0.053	ND
C-E Wall	02/15/90	7.5	11	0.018	0.023	0.180	0.006
C-W Wall	02/15/90	7.5	370	0.650	0.400	4.90	ND
C-N Wall	02/15/90	7.5	5.0	ND	ND	ND	ND
C-Bottom	02/15/90	9.0	690	ND	ND	ND	ND
<u>Stockpiles</u>							
CFS P-1	02/12/90	1.5	320	ND	0.0055	0.120	0.024
C-SP-2	02/15/90	1.5	82	ND	ND	0.006	ND
<u>Detection Limits</u>			1	0.005	0.005	0.005	0.005

<sup>1</sup> Analyzed by EPA Method 8015M.

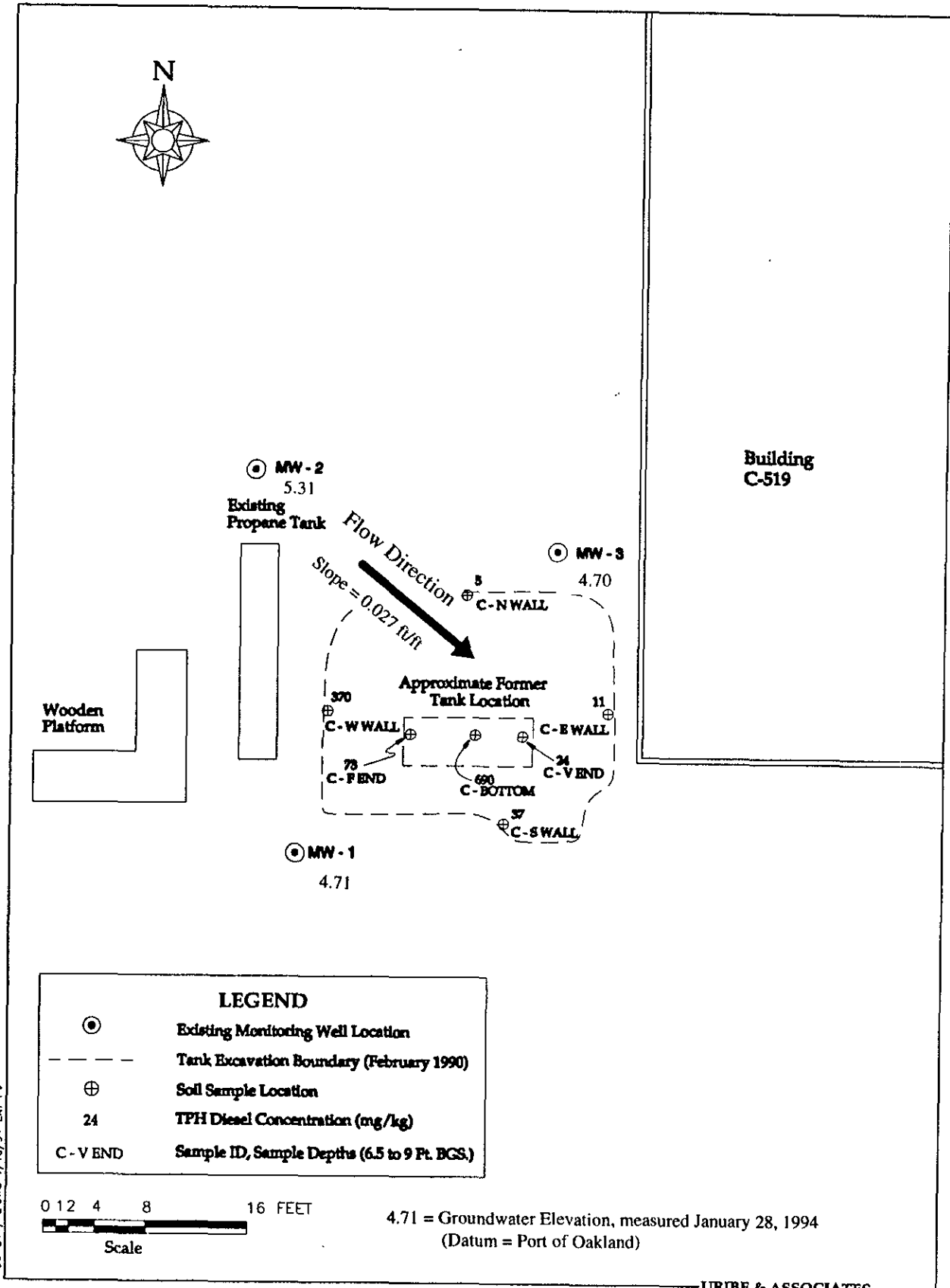
<sup>2</sup> Analyzed by EPA Method 8020.

Notes: ND = compound not identified at a concentration above the laboratory detection limit.

Laboratory reports are included in Appendix E.

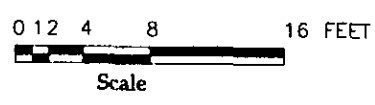
Sampling locations are shown on Figure 2.





**LEGEND**

- ⊙ Existing Monitoring Well Location
- - - - Tank Excavation Boundary (February 1990)
- ⊕ Soil Sample Location
- 24 TPH Diesel Concentration (mg/kg)
- C - V END Sample ID, Sample Depths (6.5 to 9 Ft. BGS.)

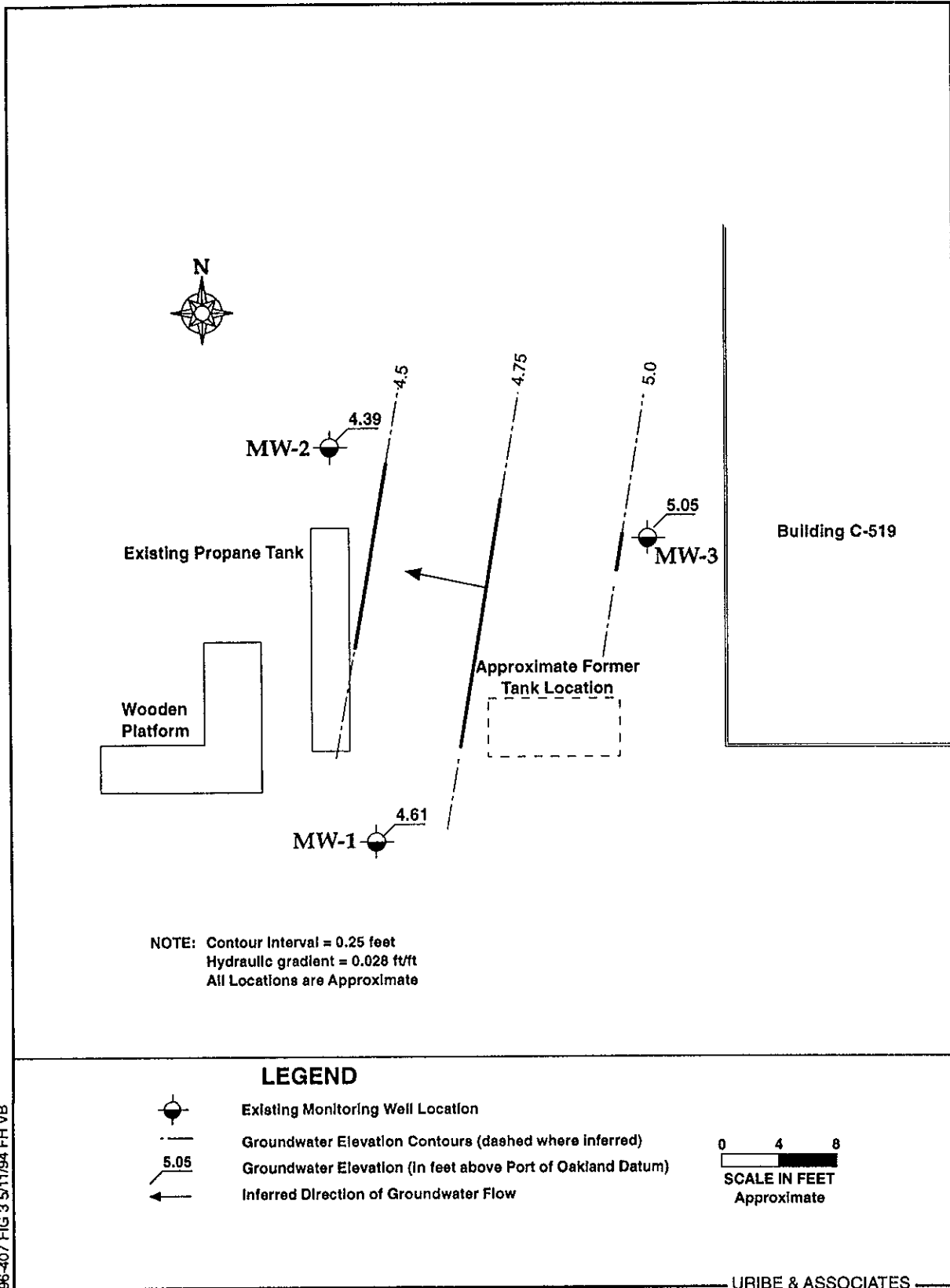


4.71 = Groundwater Elevation, measured January 28, 1994  
(Datum = Port of Oakland)

96-211/F2.DWG, 1/10/94, EXT PV

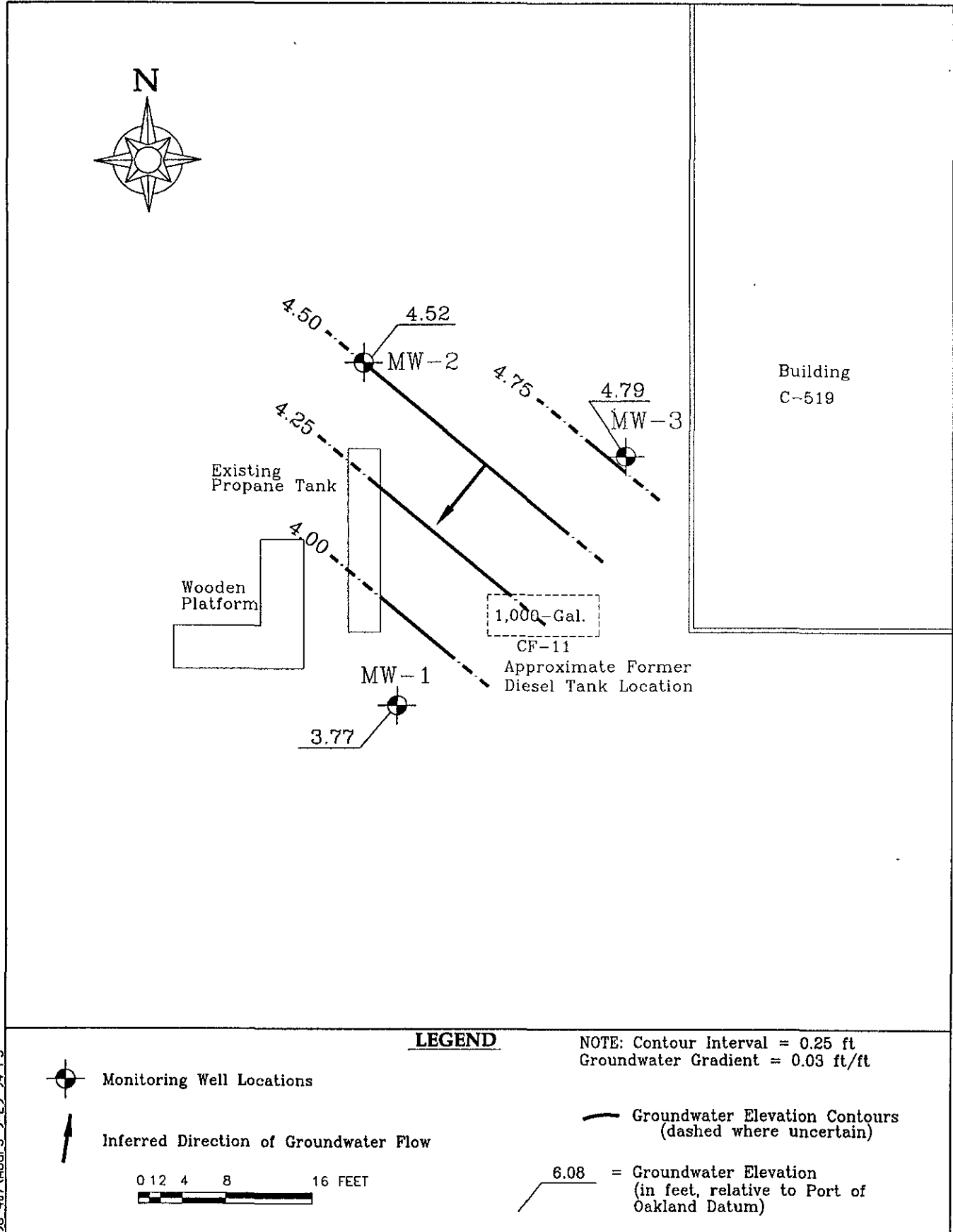
URIBE & ASSOCIATES

Figure 2: Site Map - 5110 7th Street, Berth 35, Oakland, California



96-407 FIG 3 5/11/94 FH VB

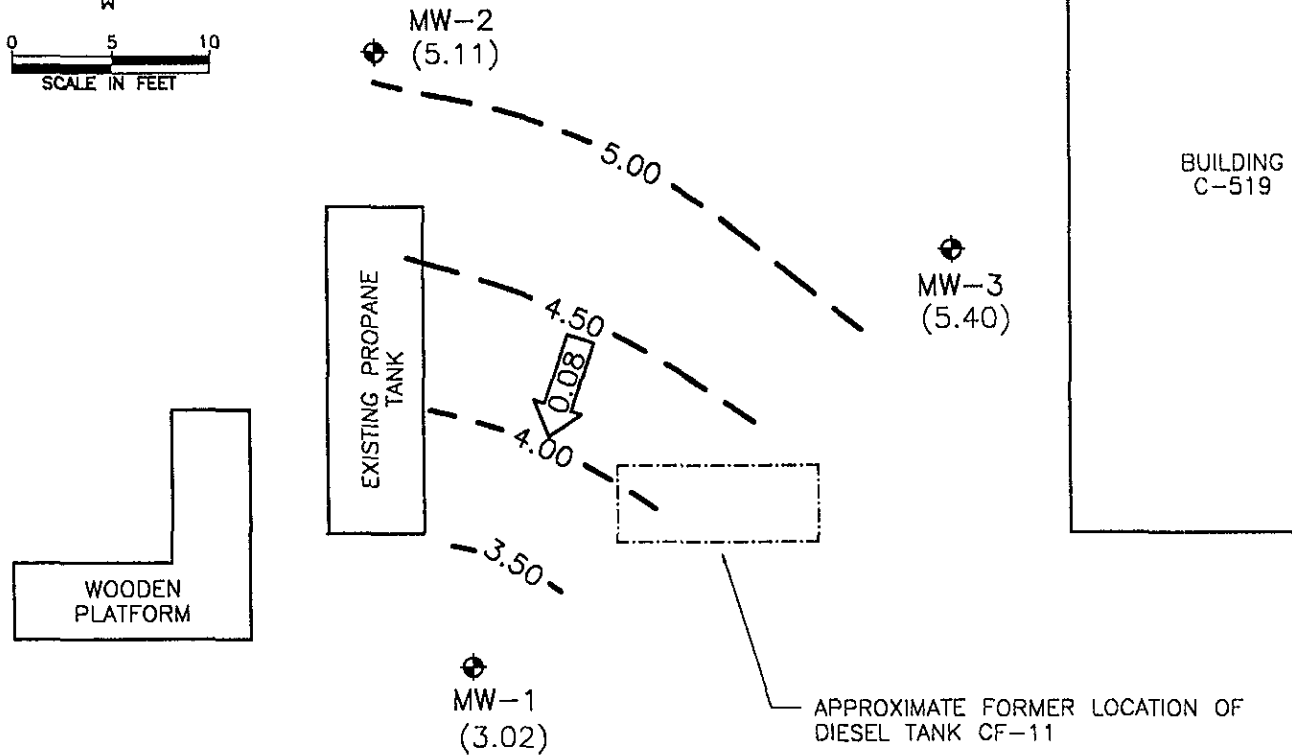
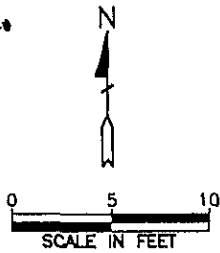
Figure 3: Potentiometric Surface Map: February 16, 1994 -  
 5110 7th Street, Berth 35, Oakland, CA



96-407 AUGF3 9-29-94 P.J

**Figure 3: Potentiometric Surface Map: August 30, 1994**  
**5110 7th Street, Berth 35, Oakland, CA**

Uribe & Associates



**LEGEND**

- ◆ GROUNDWATER MONITORING WELL
- (3.02) GROUNDWATER ELEVATION IN FEET ABOVE MEAN LOWER LOW WATER
- 3.00 - GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN LOWER LOW WATER (CONTOUR INTERVAL-0.50 FOOT)
- ← 0.08 → CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

**FIGURE 2**

**POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP**

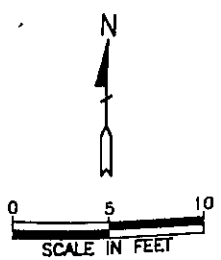
**MARCH 7, 1995**

PORT OF OAKLAND  
BERTH 35  
5110 SEVENTH STREET  
OAKLAND, CALIFORNIA

PROJECT NO. 10-253



**ALISTO ENGINEERING GROUP**  
WALNUT CREEK, CALIFORNIA



MW-2  
(5.22)

MW-3  
(5.64)

MW-1  
(3.03)

BUILDING  
C-519

EXISTING PROPANE  
TANK

WOODEN  
PLATFORM

5.00

4.50

4.00

3.50

5.50

APPROXIMATE FORMER LOCATION OF  
DIESEL TANK CF-11

**LEGEND**

- ◆ GROUNDWATER MONITORING WELL
- (3.02) GROUNDWATER ELEVATION IN FEET ABOVE MEAN LOWER LOW WATER
- 3.00 --- GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN LOWER LOW WATER (CONTOUR INTERVAL-0.50 FOOT)
- ← 0.08 ← CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT

**FIGURE 2**  
**POTENTIOMETRIC GROUNDWATER ELEVATION CONTOUR MAP**  
**MAY 31, 1995**  
 PORT OF OAKLAND  
 BERTH 35  
 5110 SEVENTH STREET  
 OAKLAND, CALIFORNIA  
 PROJECT NO. 10-253



TABLE 1 - SUMMARY OF RESULTS OF GROUND WATER MONITORING AND SAMPLING  
 PORT OF OAKLAND, BERTH 35  
 5110 SEVENTH STREET, OAKLAND, CALIFORNIA

ALISTO PROJECT NO. 10-253

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (feet)	DEPTH TO WATER (feet)	GROUNDWATER ELEVATION (b) (feet)	TPH-D (ug/l)	TPH-MO (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	TDS (mg/l)	LAB
MW-1	04/16/93	--	--	--	3700	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	--	--
MW-1	08/03/93	13.82	8.60	5.22	16000	--	0.6	ND<0.5	ND<0.5	ND<0.5	5220	--
MW-1	11/24/93	13.82	9.00	4.82	2000	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	11900	--
MW-1	01/28/94	13.07	8.36	4.71	--	--	--	--	--	--	--	--
MW-1	02/16/94	13.07	8.46	4.61	ND<250	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9200	--
MW-1	05/24/94	13.07	8.66	4.41	3800	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9400	--
MW-1	08/30/94	13.07	9.30	3.77	5200	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	9000	D&M
MW-1	03/07/95	13.07	10.05	3.02	3400	2000	1.0	0.9	0.3	0.6	9900	CEC
MW-1	05/31/95	13.07	10.04	3.03	ND<500	12000	ND<0.4	ND<0.3	ND<0.3	ND<0.4	7800	CEC
QC-1 (c)	05/31/95	13.79	--	--	--	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	--	CEC
MW-2	01/28/94	13.32	8.01	5.31	--	--	--	--	--	--	--	--
MW-2	02/16/94	13.32	8.93	4.39	ND<250	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20000	--
MW-2	05/24/94	13.32	9.00	4.32	1400	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	13000	--
MW-2	08/30/94	13.32	8.80	4.52	5700	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	12000	D&M
MW-2	03/07/95	13.32	8.21	5.11	3200	2600	ND<0.4	ND<0.3	ND<0.3	ND<0.4	12000	CEC
MW-2	05/31/95	13.32	8.10	5.22	ND<500	11000	ND<0.4	ND<0.3	ND<0.3	ND<0.4	11000	CEC
MW-3	01/28/94	13.79	9.09	4.70	--	--	--	--	--	--	--	--
MW-3	02/16/94	13.79	8.74	5.05	ND<50	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8400	--
MW-3	05/24/94	13.79	9.15	4.64	1400	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5900	--
MW-3	08/30/94	13.79	9.00	4.79	4400	--	0.8	0.9	0.7	0.6	6200	D&M
MW-3	03/07/95	13.79	8.39	5.40	870	1300	ND<0.4	ND<0.3	ND<0.3	ND<0.4	4700	CEC
QC-1 (c)	03/07/95	13.79	--	--	--	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	--	CEC
MW-3	05/31/95	13.79	8.15	5.64	ND<500	5600	ND<0.4	ND<0.3	ND<0.3	ND<0.4	4700	CEC
QC-2 (d)	03/07/95	--	--	--	--	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	--	CEC
QC-2 (d)	05/31/95	--	--	--	--	--	ND<0.4	ND<0.3	ND<0.3	ND<0.4	--	CEC

ABBREVIATIONS:

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
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 in feet above mean lower low water.
- (c) Blind duplicate.
- (d) Travel blank.