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

Alameda County CC4580
Environmental Protection Services
1131 Harbor Bay Parkway, Room 250
Alameda CA 94502-6577

October 1, 1996
LOP STID 3781

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

Attn: Mr. Lee Wilson
Sealand Services Inc.
1425 Maritime St.
Oakland CA 94607

RE: **REMEDIAL ACTION COMPLETION CERTIFICATION**
Sealand Services Inc., 1425 Maritime St., Oakland CA 94607

Dear Mr. Prall and Mr. Wilson,

Thank you for submitting the Well Demolition Report, dated 9/24/96, prepared by Wright Environmental Services, Inc.

This letter confirms the completion of site investigation and remedial action for the following two underground storage tanks at the above referenced site: one 10,000-gallon gasoline, and one 10,000-gallon diesel, formerly located near building #207. Based on the available information 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** at this time. Please be aware that this does not free present or future landowners or operators from cleanup responsibilities in the event that new information indicates a pollutant problem on the site or originating from the site.

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. The owner must promptly notify this agency 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.

If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761. 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).

Very truly yours,

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
John Lynch, Wright Environmental Services, Inc., 4220 Commercial Dr., #5, Tracy CA 95376
Jennifer Eberle (3 copies)

LOP/Completion
je.3781clos.let
enclosure (clos sum)

01-1310

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION **Date:** 5/16/96

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: **Sealand Services, Inc.**
Site facility address: **1425 Maritime St., Oakland CA 94607**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **3781**
URF filing date: 4/7/89 SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
1. Port of Oakland	530 Water St., Oakland CA 94607	John Prall: 510-272-1373
2. Lee Wilson, Sealand Services Inc.	1425 Maritime St., Oakland CA 94607	510-271-~~1757~~ 1082

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	10,000	diesel	removed	9/91
2	10,000	gasoline	removed	9/91

96 JUL 15 AM 8:54
ENVIRONMENTAL PROTECTION

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown
Site characterization complete? YES
Date approved by oversight agency: 5/17/96
Monitoring Wells installed? YES Number: 5
Proper screened interval? YES
Highest Groundwater Elevation (GWE): 6.40' MSL (MW2) Lowest GWE: 7.41' MSL (MW4)
Flow direction: site gradient is very flat, on average 0.001 ft/ft, and gw flow fluctuates.
Most sensitive current use: industrial; ship container storage and movement
Are drinking water wells affected? NO Aquifer name:
Is surface water affected? NO Nearest affected SW name:
Off-site beneficial use impacts (addresses/locations): unknown

Leaking Underground Fuel Storage Tank Program

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
Tanks	two 10,000 gal	Disposed by H&H HW Manifest # 90537756 and 90537788	9/30/91 and 10/1/91
Tank Product and Rinsate	600 gal	Disposed by H&H HW Manifest #90537705	9/26/91
Groundwater and Floating Product (during tank removal)	2500 gal	Disposed by H&H HW Manifest # 90537765	9/30/91
Soil	400 tons	Disposed to Reed & Graham In San Jose (asphalt recyclers)	Dec 91
Drill Cuttings	1 ton	Disposed to BFI in Livermore	March 1993
Oil and water (from free product bailing)	750 gal	Disposed to Petroleum Recycling Corp. In Patterson HW Manifest # 93194287	8/2/94
	385 gal	HW Manifest # 93606919	12/6/94

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

Contaminant	Soil (ppm)		Water (ppm)	
	Before*	After**	Before#	After##
TPH (Gas)	350	3.0	NA	ND
TPH (Diesel)	7,300	280	27	5.6
Benzene	ND	ND	NA	ND
Toluene	ND	ND	NA	ND
Xylene	4.9	0.013	NA	ND
Ethylbenzene	2.1	ND	NA	ND
Oil and Grease	NA	NA	21	NA

Comments (Depth of Remediation, etc.):
* Before soil samples are from the initial four (EX-A through EX-D) from tank pit; See Fig 4
** After soil samples are from the overexcavation (samples SS1, BS1, and SC1); see Fig 4
# Before water sample is a grab sample from the open excavation
After water sample is from the Mws (hits are from EW-5); See Table 4

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: A soil management plan and a health and safety plan must be submitted if the asphalt cap is disturbed in the area of residual contamination (around EW-5).

Should corrective action be reviewed if land use changes? YES
Monitoring wells Decommisioned: they will be when we get RWQCB sign off
Number Decommisioned: Number Retained:
List enforcement actions taken: none
List enforcement actions rescinded: none

V. ADDITIONAL COMMENTS, DATA, ETC.

An Unauthorized Leak Report (ULR) was filed with the County on 4/7/89, due to a failed 10,000-gallon diesel UST test on 2/16/89. An Underground Tank Closure Plan was approved by the County on 9/19/91; Sealand planned to remove two 10,000-gallon USTs containing gasoline and diesel. **See Figures 1, 1a, 2 and 3.**

These USTs were removed on 9/30/91, and witnessed by the County representative (Dennis Byrne). According to his inspection report, "a considerable amount of diesel or waste oil product was floating on the water within excavation. This material was pumped out prior to collecting a water sample." One grab water sample and four soil samples were collected. **See Figure 4.**

Peregren Environmental Group Inc. prepared the "Closure Report," presumably dated 10/27/92. They reported <1 ppm TPHg in all samples except EX-C (350 ppm TPHg). Benzene was ND in all 4 samples. TPH-d was ND in EX-A and EX-B, while EX-C contained 7,300 ppm, and EX-D contained 27 ppm. The soil stockpile had 990 ppm TPHg, ND benzene, and 8100 ppm TPHd. The lab reported that the hit in EX-D was due to a heavier petroleum product, possibly motor oil. It should be noted that the lab report was handwritten and therefore preliminary; however, it was signed by the lab. No final lab report was submitted. Results from the grab groundwater sample indicated 27,000 ug/L TPHd, 21,000 ug/L and Oil and Grease (by Method 5520). BTEX was apparently not analyzed. There was no chain of custody for this lab report, which again was handwritten, although signed.

According to the Peregren report, the area around sample EX-C was overexcavated on 10/7/91; three additional soil samples were collected (SS-1, BS-1, and SC-1). **See Figure 4.** Results indicated ND TPHg (except 3.0 ppm in SC1) and ND BTEX (except 0.013 ppm xylenes in SC1). TPHd was reported as 19 ppm in SS1, ND in BS1, and 280 ppm in SC1. Peregren reports that additional soil was removed from the area of SC1 (pipe trench) the following day. It appears that no samples were collected, however.

Peregren reported that the stockpiled soils were transported on 12/17 and 12/18/91 to Reed & Graham of San Jose, an asphalt recycler. The attached Weighmaster Certificates indicate that approximately 400 tons of soil were thus offhauled. Peregren reported that the excavation was backfilled with Class III 3/4 inch drain rock to the high tide line, then with Class II aggregate.

Earth Systems Environmental (ESE) installed 4 wells (M1 to M4) in January 1993. **See Figure 5.** The boring logs and well construction details are included as **Appendix A.** Groundwater was encountered between 5 and 6 feet bgs. The well screens were placed 0.5 to 1.0 feet above the water table. ESE reported that while backfilling, an 8" diameter HDPE corrugated drain pipe was installed vertically in the north end of the excavation. This was presumably done by Peregren, although not documented in Peregren's report. The soil and groundwater data is tabulated in **Tables 1 and 2.** A sheen was detected in the backfill well. ESE recommended replacing the non-permitted, unsealed sampling point in the former UST pit (MW5) with a permitted, sealed 6" diameter well which could be used for recovery purposes if necessary.

The replacement extraction well (EW-5) was installed by ESE on 10/25/93; **See Figure 6**. The boring log and well construction diagram are included in **Appendix B.** Results of groundwater sampling from MW5 and EW5 are tabulated in **Table 3.** During subsequent sampling of the new well, 0.25" of floating product was encountered.

As a response to the County's 1/6/94 letter requesting free product removal, Wright Environmental initiated the installation and service of a 4" floating bailer, to be monitored weekly. An absorbent sock was subsequently used to soak free product from well EW5. Monthly free product removal status reports were submitted to the County, beginning in 2/94. Thickness of the product initially ranged from a 1/8" to 1/2". The servicing frequency was changed to bi-monthly on 4/15/94, due to a decrease in free product. The frequency was again changed in 8/94, due to an increased amount of free product. The free product was reported as a thick, oily petroleum product. A minimal quantity has been recovered, estimated to be a total of approximately 20 gallons. Floating product has never been observed in MW1, MW2, MW3, or MW4, with the exception of a sheen observed once in MW4 on 1/25/95. Floating product has decreased in EW5 to none detected on 4/5/96. **See Table 5.**

Groundwater has been monitored and sampled since 1/28/93. There are eleven quarters of sampling data; **See Table 4.** BTEX and TPH-g have been ND for ten or eleven quarters in MW1 through MW4, while BTEX and TPH-g have been ND for the past four quarters in EW5. TPH-d has fluctuated from ND to 1.0 mg/L in MW1, while it has fluctuated from ND to less than 1.0 mg/L in MW2 and MW4. However, TPH-d has been present in significant concentrations in MW3 and EW5. However, the absence of BTEX indicates the presence of an insoluble petroleum product depleted in volatile content.

The site has had a long history of industrial use, and is a dredge landfilled area which was formerly a marshy or shallow marine environment. The data collected indicate clear trends: a very flat gradient, the absence of BTEX, and decrease in floating product to none detected. In addition, the extent of the oily, thick free product is limited, as evidenced by the lack thereof in MW1 through MW4. The dissolved diesel plume in the wells surrounding EW5 is <1 ppm in concentration, with the exception of MW3 (3.8 ppm last reading). These concentrations are fairly low. As per ASTM's E1739-95 publication for "Risk Based Corrective Action Applied at Petroleum Release Sites," the Risk Based Screening Levels (RBSL) for napthalene and benzo(a) pyrene are "<S" which means that the selected risk level is not exceeded for any possible dissolved level. Case closure is recommended.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle
Signature: J Eberle
Title: Hazardous Materials Specialist
Date: 6-7-96

Reviewed by

1. Name: Amy Leech
   Signature: A Leech
   Title: Hazardous Materials Specialist
   Date: 06/07/96
2. Name: Tom Peacock
   Signature: Tom Peacock
   Title: Manager
   Date: 6-26-96

VII. RWQCB NOTIFICATION

Date Submitted to RB: 6-27-96
RB Response: Approved
RWQCB Staff Name: Kevin Graves
Title: Associate Water Resources Control Engineer
Date: K Graves

Borings for MW1 – MW4

1-28-93

TABLE 1

SUMMARY OF SOIL SAMPLE ANALYTICAL DATA

418.1

Sample Number	TPHG (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	TPHD (ppm)	TRPH (ppm)
1-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	11
2-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
3-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
4-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

HC mo O+G

NOTES:

TPHG	Total petroleum hydrocarbons as gasoline
TPHD	Total petroleum hydrocarbons as diesel
ppm	Concentration in parts per million
ppb	Concentration in parts per billion
N.D.	Not detected at or above the laboratory detection limit
TRPH	Total recoverable petroleum hydrocarbons (418.1)

sampled 7-1-93

TABLE 2

SUMMARY OF GROUNDWATER ANALYTICAL DATA

418.1

Sample Number	TPHG (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	TPHD (ppm)	TRPH (ppm)
M-1	N.D.	N.D.	N.D.	N.D.	2	N.D.	N.D.
M-2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
M-3	N.D.	N.D.	N.D.	10	20	N.D.	1
M-4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

1 = 1000 ppb

M3 is UG mw

NOTES:

TPHG	Total petroleum hydrocarbons as gasoline
TPHD	Total petroleum hydrocarbons as diesel
ppm	Concentration in parts per million
ppb	Concentration in parts per billion
N.D.	Not detected at or above the laboratory detection limit
TRPH	Total recoverable petroleum hydrocarbons

8015

infrared test - can't distinguish bet. O+G + TPHd.

John Lynn says lab did 413.2 + it's hard to se with it's O+G or TPH. This explain in 1st QR. as being closer to TPHd. ESE neglected to ask lab to distinguish bet. O+G + diesel

TABLE 4 3

Summary of Groundwater Analytical Results

WELL ID	Date Sampled	TPHD (mg/L)	TPHG (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl Benzene (µg/L)	Total Xylenes (µg/L)	Oil and Grease (mg/L)
MW-5	June 8, 1993	580	*30	N.D.	N.D.	N.D.	N.D.	N.D.
EW-5	November 1, 1993	18,000	*17	N.R.	N.R.	N.R.	N.R.	8,900

replaced by EW-5

TPHG	Total petroleum hydrocarbons as gasoline
TPHD	Total extractable petroleum hydrocarbons as diesel
µg/L	Concentration in micrograms per liter
mg/L	Concentration in milligrams per liter
N.D.	Not detected at or above the laboratory detection limit
N.R.	Not requested for laboratory analysis
*	The laboratory indicated that the pattern does not match that for gasoline

" EW-5 had FP." - J.L.

Table 4. Groundwater Chemical Monitoring Data

Well No.	Date Sampled	TPHD mg/l	TPHG mg/l	Benzene	Toluene	Ethylben.	Xylene	Oil&Grease mg/l
				---------- ug/l ----------				
MW-1	1/28/93	ND	ND	ND	ND	ND	ND	ND
	6/8/93	1.0	30.0	ND	ND	ND	ND	ND
	9/9/93	ND	ND	ND	ND	ND	ND	ND
	12/16/93	ND	ND	ND	ND	ND	ND	ND
	3/15/94	ND	NR	ND	ND	ND	ND	NR
	7/7/94	ND	ND	ND	ND	ND	ND	ND
	10/27/94	ND	ND	ND	ND	ND	ND	NR
	1/25/95	0.26	ND	ND	ND	ND	ND	NR
	4/27/95	ND	ND	ND	ND	ND	ND	NR
	7/25/95	ND	ND	ND	ND	ND	ND	NR
	2/21/96	0.52	ND	ND	ND	ND	ND	NR
MW-2	1/28/93	ND	ND	ND	ND	ND	ND	ND
	6/8/93	0.19	ND	ND	ND	ND	ND	ND
	9/9/93	ND	ND	ND	ND	ND	ND	ND
	12/16/93	ND	ND	ND	ND	ND	ND	ND
	3/15/94	ND	ND	ND	ND	ND	ND	ND
	7/7/94	ND	ND	ND	ND	ND	ND	ND
	10/27/94	ND	ND	ND	ND	ND	ND	NR
	1/25/95	ND	ND	ND	ND	ND	ND	NR
	4/27/95	ND	ND	ND	ND	ND	ND	NR
	7/25/95	ND	ND	ND	ND	ND	ND	NR
	2/21/96	0.41	ND	ND	ND	ND	ND	NR
MW-3	1/28/93	ND	ND	ND	ND	10.0	20.0	1.0
	6/8/93	7.9	ND	ND	ND	ND	ND	ND
	9/9/93	6.0	ND	ND	ND	ND	ND	ND
	12/16/93	3.0	ND	ND	ND	ND	ND	ND
	3/15/94	ND	NR	ND	ND	ND	ND	NR
	7/7/94	3.0	ND	ND	ND	ND	ND	NR
	10/27/94	4.6	ND	ND	ND	ND	ND	NR
	1/25/95	0.65	ND	ND	ND	ND	ND	NR
	4/27/95	0.18	ND	ND	ND	ND	ND	NR
	7/25/95	12.0	ND	ND	ND	ND	ND	NR
	2/21/96	3.8	ND	ND	ND	ND	ND	NR
MW-4	1/28/93	ND	ND	ND	ND	ND	ND	ND
	6/8/93	0.80	ND	ND	ND	ND	ND	ND
	9/9/93	ND	ND	ND	ND	ND	ND	ND
	12/16/93	ND	ND	ND	ND	ND	ND	ND
	3/15/94	ND	ND	ND	ND	ND	ND	ND
	7/7/94	ND	ND	ND	ND	ND	ND	NR
	10/27/94	ND	ND	ND	ND	ND	ND	NR
	1/25/95	ND	ND	ND	ND	ND	ND	NR

4

Table 4. Monitoring Wells Sampling Data, con't.

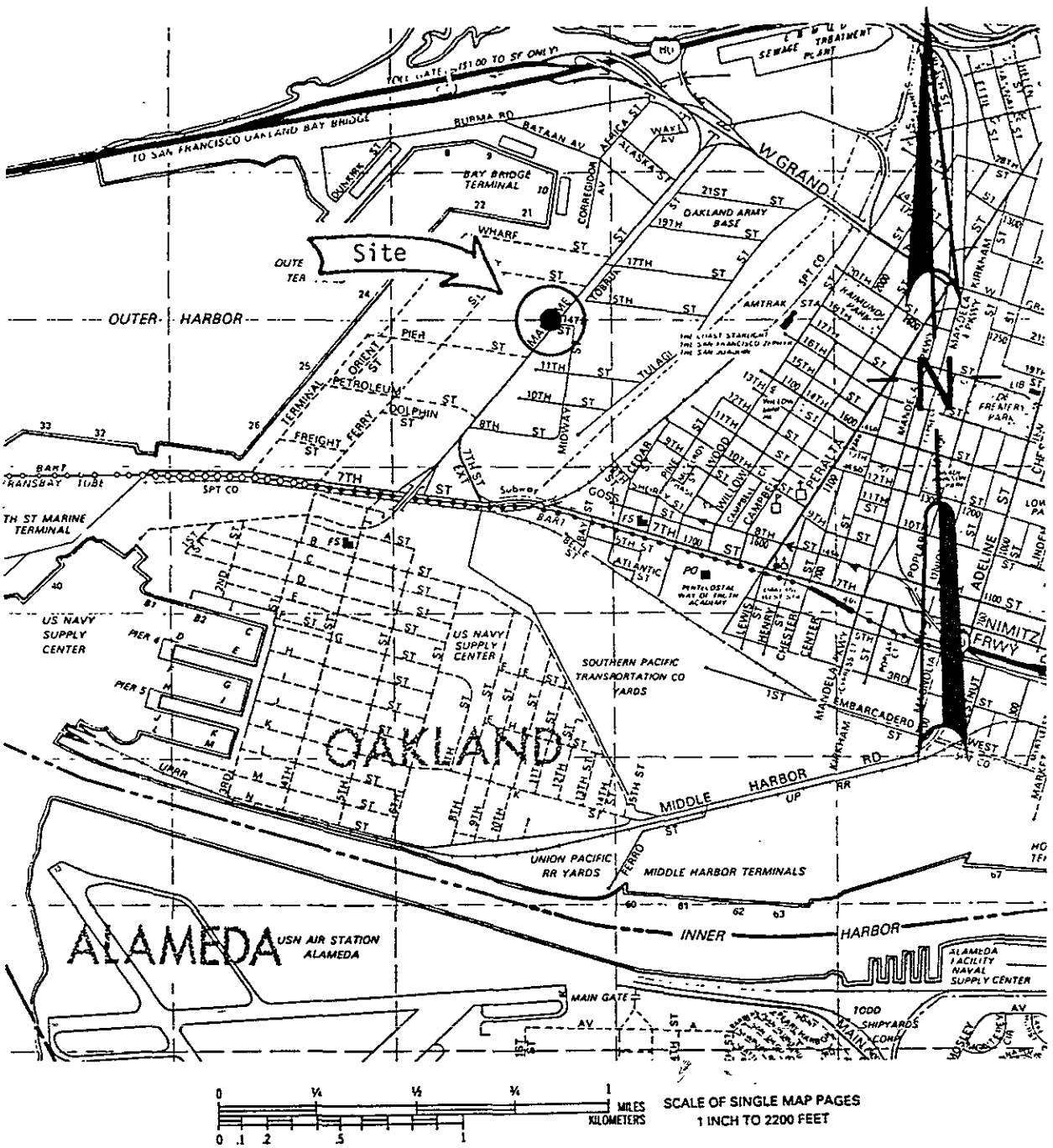
Well No.	Date Sampled	TPHD mg/l	TPHG mg/l	Benzene	Toluene	Ethylben.	Xylene	Oil&Grease mg/l
				---------- ug/l ----------				
	4/27/95	ND	ND	ND	ND	ND	ND	NR
	7/25/95	0.80	ND	ND	ND	ND	ND	NR
	2/21/96	0.40	ND	ND	ND	ND	ND	NR
MW-5¥	6/8/93	580	30.0*	ND	ND	ND	ND	ND
EW-5	11/1/93	18,000	17.0*	NR	NR	NR	NR	8,900
	12/16/93	42.0	7.4*	7.2	ND	5.4	9.2	89
	3/15/94	20.0	NR	5.9	ND	ND	2.7	NR
	7/7/94	500	31	4.2	ND	4.7	41	NR
	10/27/94	19,000	26*	ND	22	100	42	NR
	1/25/95	2.0	ND	ND	ND	ND	ND	NR
	4/27/95	0.18	ND	ND	ND	ND	ND	NR
	7/25/95	0.16	ND	ND	ND	ND	ND	NR
	2/21/96	5.60	ND	ND	ND	ND	ND	NR

Notes: TPHD - Total Petroleum Hydrocarbons as Diesel
TPHG - Total Petroleum Hydrocarbons as Gasoline
ND - None Detected NR - Not Requested
mg/l - Milligrams per Liter
ug/l - Micrograms per Liter
¥ - MW-5 and EW-5 are the same well.
* - Laboratory reported that pattern does not match that for gasoline.
Chemical data from 1/93 through 7/94 from Earth Systems Environmental, Inc.

Table 5 Groundwater Elevation Measurements

Well No.	Date Sampled	Top of Casing Elev, MSL	Depth to Water (feet)	Groundwater Elev, MSL	Floating Product
MW-1	10/27/94	12.39	5.95	6.44	None
MW-1	1/25/95	--	5.07	7.32	None
MW-1	4/27/95	--	5.09	7.30	None
MW-1	7/25/95	--	5.52	6.87	None
MW-1	2/21/96	--	5.26	7.13	None
MW-2	10/27/94	12.47	6.07	6.40	None
MW-2	1/25/95	--	5.28	7.19	None
MW-2	4/27/95	--	5.30	7.17	None
MW-2	7/25/95	--	5.60	6.87	None
MW-2	2/21/96	--	5.42	7.05	None
MW-3	10/27/94	12.20	5.79	6.41	None
MW-3	1/25/95	--	4.90	7.30	Sheen
MW-3	4/27/95	--	4.98	7.22	None
MW-3	7/25/95	--	5.32	6.88	None
MW-3	2/21/96	--	5.04	7.16	None
MW-4	10/27/94	12.51	6.08	6.43	None
MW-4	1/25/95	--	5.10	7.41	None
MW-4	4/27/95	--	5.28	7.23	None
MW-4	7/25/95	--	5.68	6.83	None
MW-4	2/21/96	--	5.30	7.21	None
EW-5	10/27/94	11.67	5.26	6.41	0.06'
EW-5	1/25/95	--	4.34	7.33	Sheen
EW-5	4/27/95	--	4.35	7.32	Sheen
EW-5	4/27/95	--	4.75	6.92	Sheen
EW-5	2/21/96	--	4.56	7.02	0.03'
EW-5	4/5/96	--	4.48	7.19	None

A groundwater contour map, prepared for February 21, 1996 [redacted]



-base from Thomas Bros. Maps, #40281

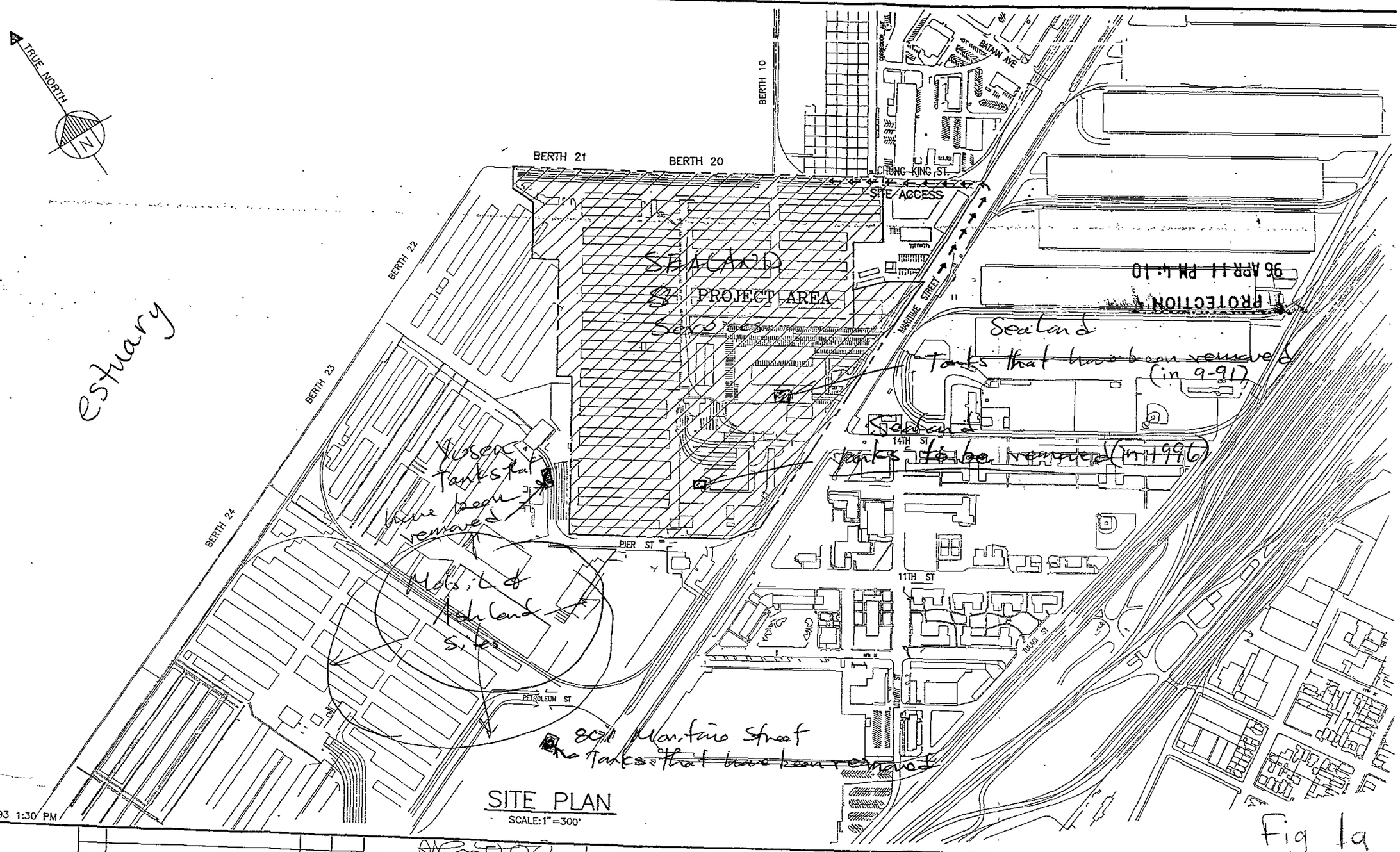
Site Location Map

SeaLand Services, Inc.
1425 Maritime Street
Oakland, CA

Project No. 3006-QM
Scale: see above
Date: April, 1996

Figure 1

Wright Environmental Services, Inc.
Tracy CA



SITE PLAN
SCALE: 1" = 300'

1=300 6-12-93 1:30 PM

Fig 1a

REFERENCES
PLANS
FIELD BOOKS

"PORT OF OAKLAND DATUM" IS 3.20' BELOW MEAN SEA LEVEL

NO.	REVISIONS	DATE	APP'D

REVIEWED _____ FACILITIES DEPARTMENT
REVIEWED _____ CONSTRUCTION DEPARTMENT
REVIEWED _____ PROJECT PLANNING DEPARTMENT

DRAWN SS/MN/HL
DESIGNED M. Maley S 3414 REG. ENGINEER NO.
CHECKED C. Chan C 43841 REG. ENGINEER NO.
REVIEWED V. Ishkanian

PORT OF OAKLAND
530 WATER STREET OAKLAND, CALIFORNIA

CHIEF ENGINEER
APPROVED

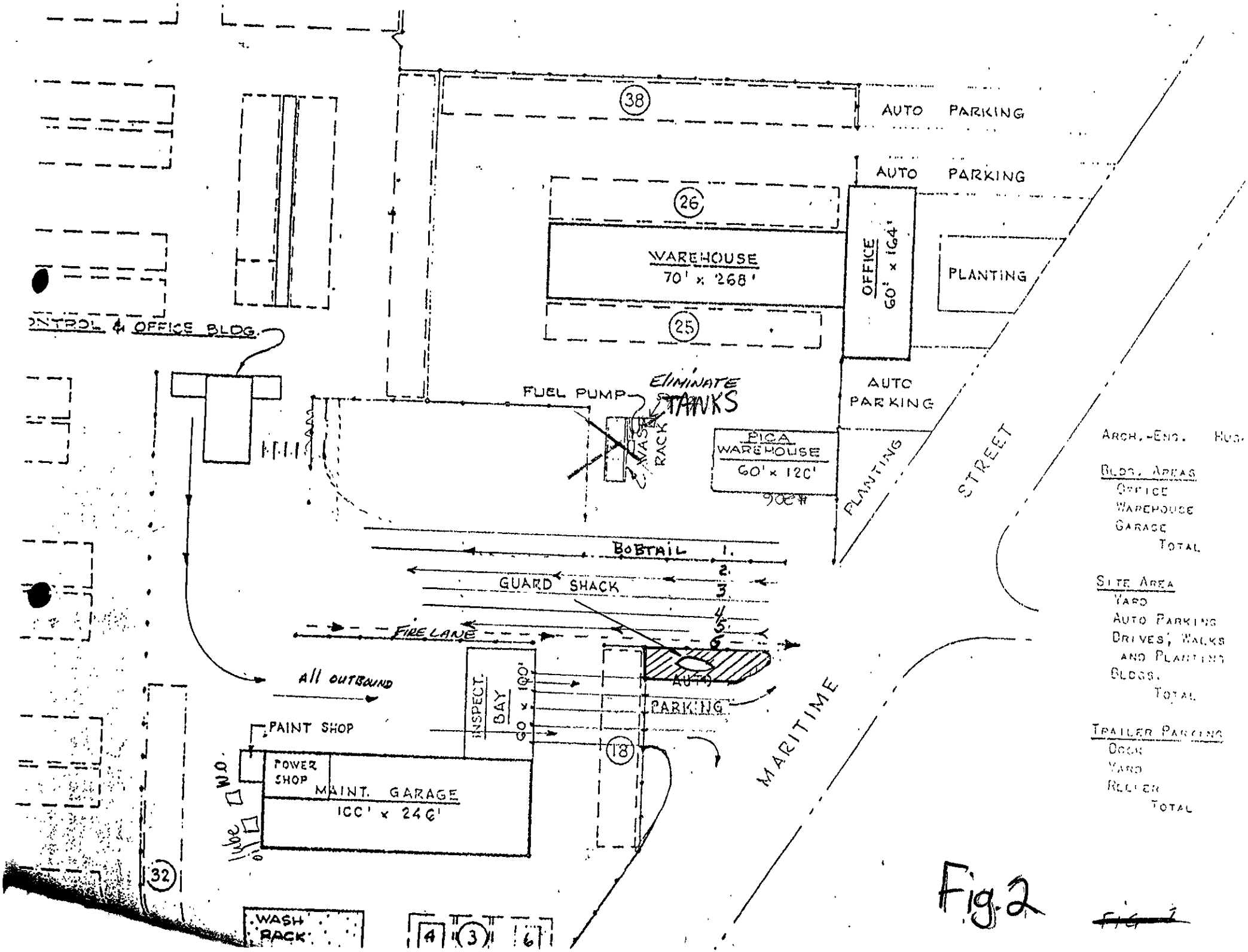

38
AUTO PARKING
AUTO PARKING
26
WAREHOUSE
70' x 268'
25
OFFICE
60' x 164'
PLANTING
ONTROL & OFFICE BLDG.
FUEL PUMP
ELIMINATE
TANKS
WASH RACK
AUTO PARKING
PLANTING
PICA WAREHOUSE
60' x 120'
STREET
BOBTAIL
GUARD SHACK
FIRE LANE
ALL OUTBOUND
INSPECT. BAY
60 x 100'
AUTO PARKING
PAINT SHOP
POWER SHOP
MAINT. GARAGE
100' x 240'
W.D.
Lube
MARITIME
18
32
WASH RACK
4
3
6
ARCH.-ENG. HUS.
BLDG. AREAS
OFFICE
WAREHOUSE
GARAGE
TOTAL
SITE AREA
YARD
AUTO PARKING
DRIVES, WALKS AND PLANTING
BLDGS.
TOTAL
TRAILER PARKING
DOCK
YARD
ROLLER
TOTAL

Fig. 2

~~Fig. 1~~

Fuel tank layout, Sealand, Oakland 4-11-90

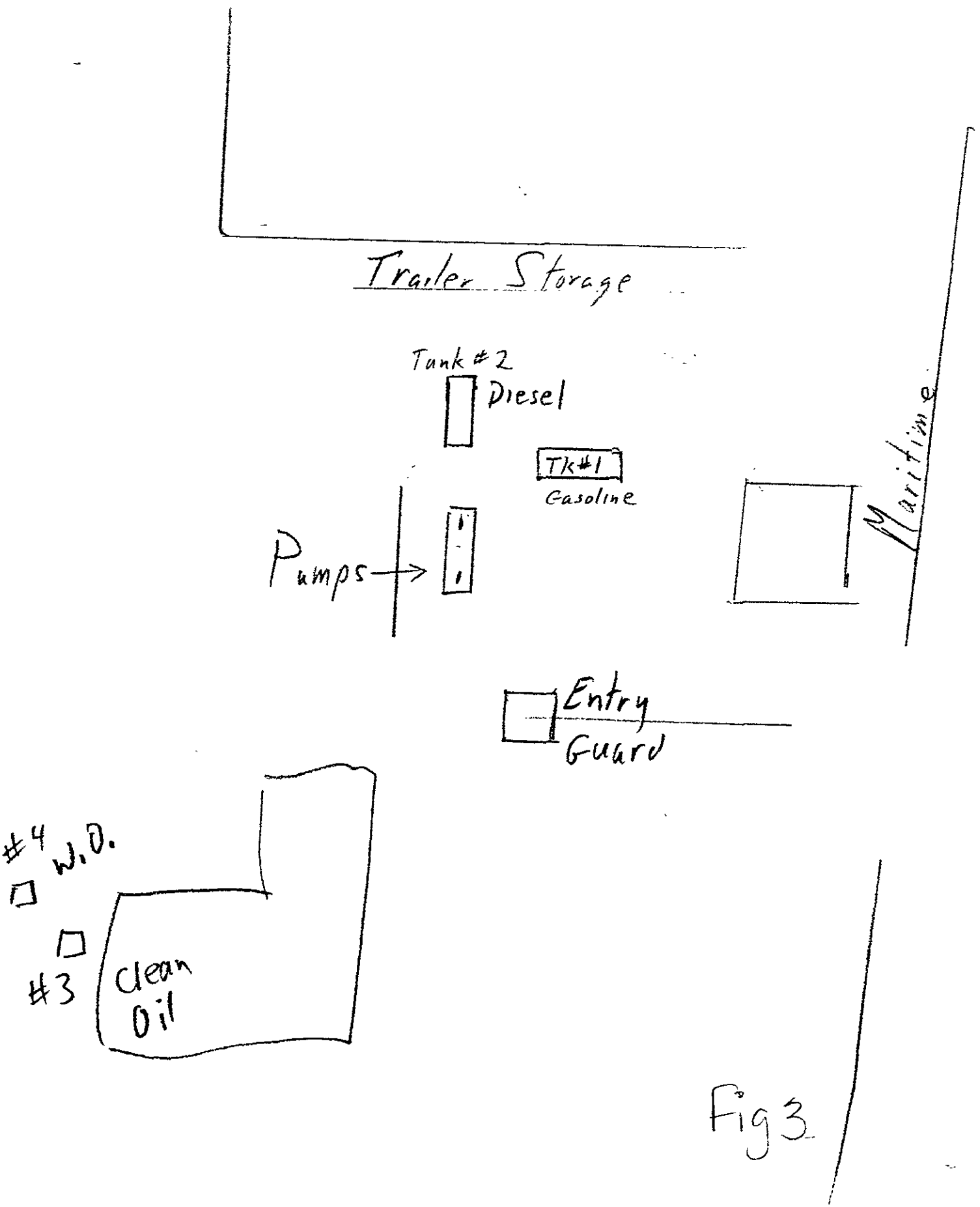


Fig 3

~~Figure 1~~

Soil Sample Locations

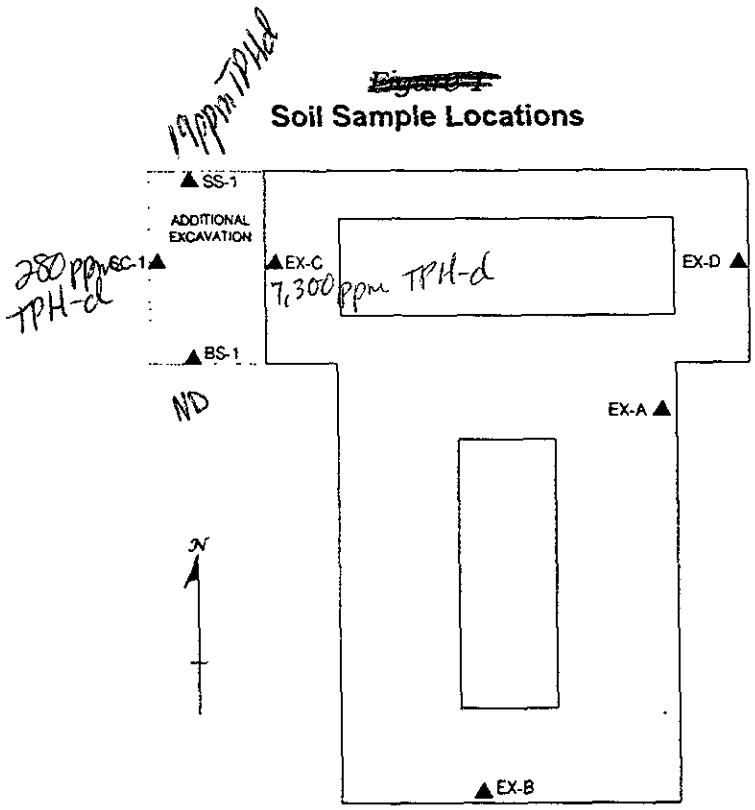
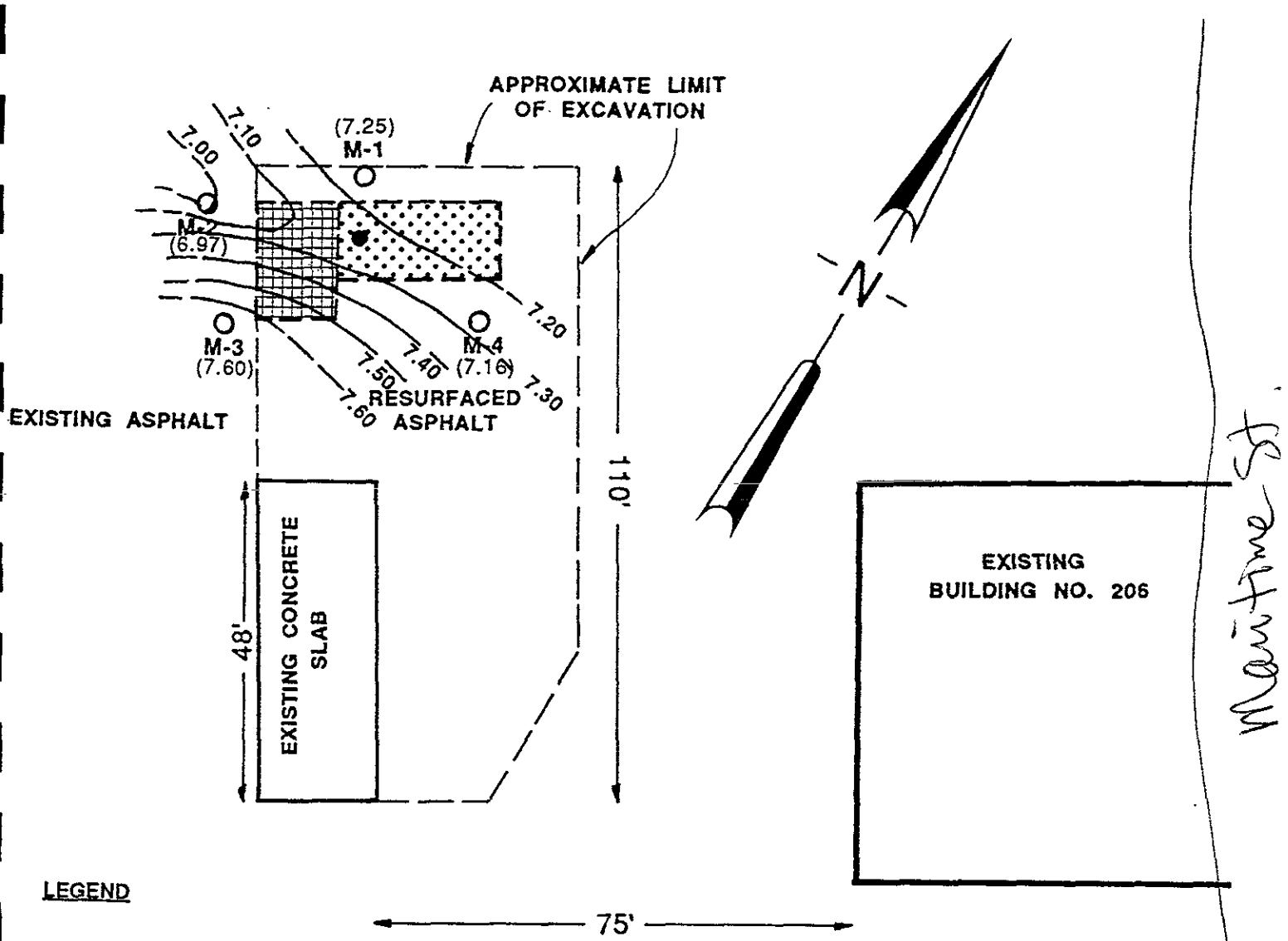


Fig 4



LEGEND

- ● PRE-EXISTING GROUNDWATER MONITORING WELL
- ○ M-4 EXISTING GROUNDWATER MONITORING WELL
- FORMER 10,000 GALLON DIESEL UST
- FORMER 10,000 GALLON GASOLINE UST
- (7.60) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 7.60 CONTOUR OF GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL) CONTOUR INTERVAL = 0.1 FEET

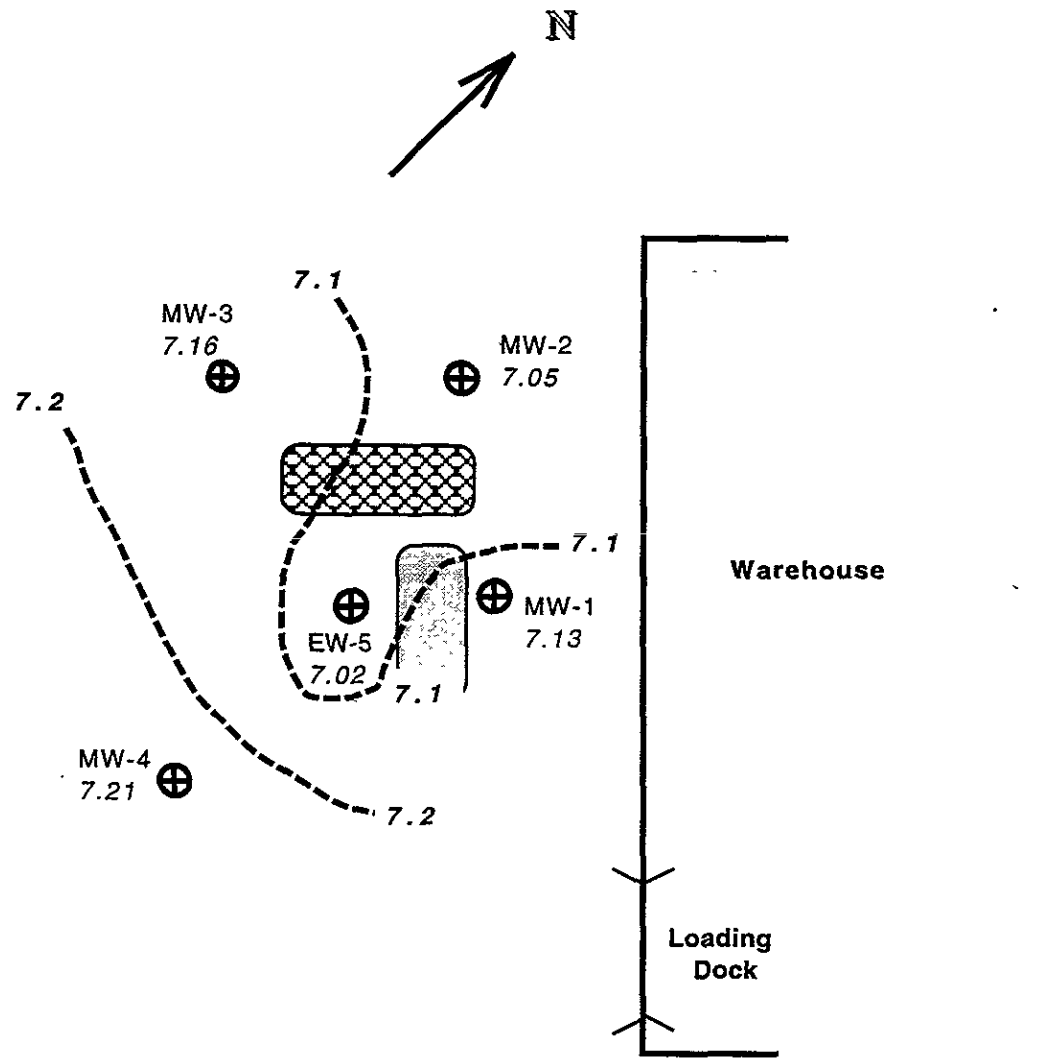
SCALE: 1" = 25'

Earth Systems Environmental, Inc.
A Member of The Earth Systems Group

GROUNDWATER ELEVATION MAP
SEALAND
1425 Maritime Street
Oakland, California

DATE: 2/26/93 JOB NO: EJ-4065-1

FIG. NO: 5



0 50
feet

MW-4
7.21
Existing Monitoring Well

7.1
Groundwater Elevation Contour
February 21, 1996, in feet, MSL

Entrance off
Maritime Street

WES revised, field checked Nov., 1994

Groundwater Elevation Contour Map, Feb. 21, 1996

Project No. 3006-QM
Scale: 1" = 50'
Date: Mar., 1996

Sealand Services
1425 Maritime Street
Oakland, Ca

Figure 6

Wright Environmental Services, Inc.
Tracy, CA

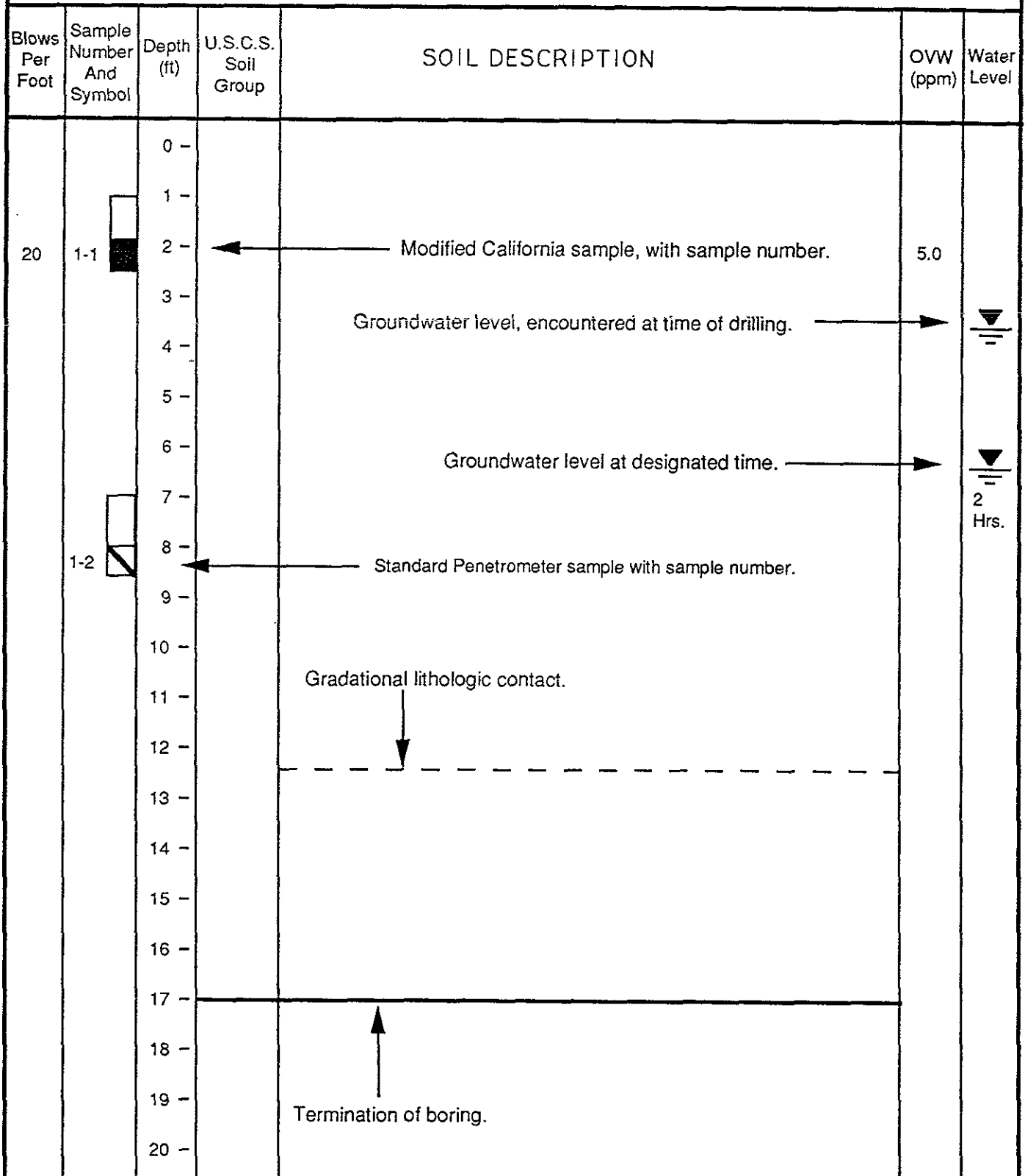
Appendix A

Key to Exploratory Boring Logs

DATE DRILLED: January 28, 1993
BORING DIAMETER: 8 inches
PROJECT NUMBER: EJ-4065-1
PROJECT NAME: SEA-LAND

Key

BORING NO.: M-1 to M-4
DEPTH TO GROUNDWATER: 6.0 feet
LOGGED BY: LDP



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Reviewed by R.G./C.E.G.

Figure No. A1

Log of Exploratory Boring

DATE DRILLED: January 28, 1993
BORING DIAMETER: 8 inches
PROJECT NUMBER: EJ-4065-1
PROJECT NAME: SEA-LAND

BORING NO.: M-1
DEPTH TO GROUNDWATER: 6.0 feet
LOGGED BY: LDP

Blows Per Foot	Sample Number	Depth (ft)	U.S.C.S. Soil Group	SOIL DESCRIPTION	OVM (ppm)	Water Level
		0 –		4 inches asphaltic concrete pavement 6 inches baserock.		
		1 –	GC	Clayey Fine GRAVEL (Fill), brown, subangular to rounded clasts, slightly damp.		
		2 –				
		3 –		Grades to Sandy GRAVEL at 3 feet.		
		4 –	SM	Fine SAND with Silt, gray, medium dense, moist.		
21	1-1	5 –			1.0	▼
		6 –		Becomes very Silty , dark gray, at 6 feet, shell fragments, wet.		
		7 –				
		8 –				
		9 –				
		10 –				
20	1-2	11 –			6.0	
		12 –				
		13 –				
		14 –				
		15 –				
		16 –				
6	1-3	17 –	CL/CH	Silty CLAY (Bay Mud), dark gray, interbedded with Clayey SAND, shell fragments, organic odor, medium stiff, very moist.	0.3	
		18 –		Boring terminated at 17.5 feet. Groundwater encountered at 6.0 feet.		
		19 –				
		20 –				

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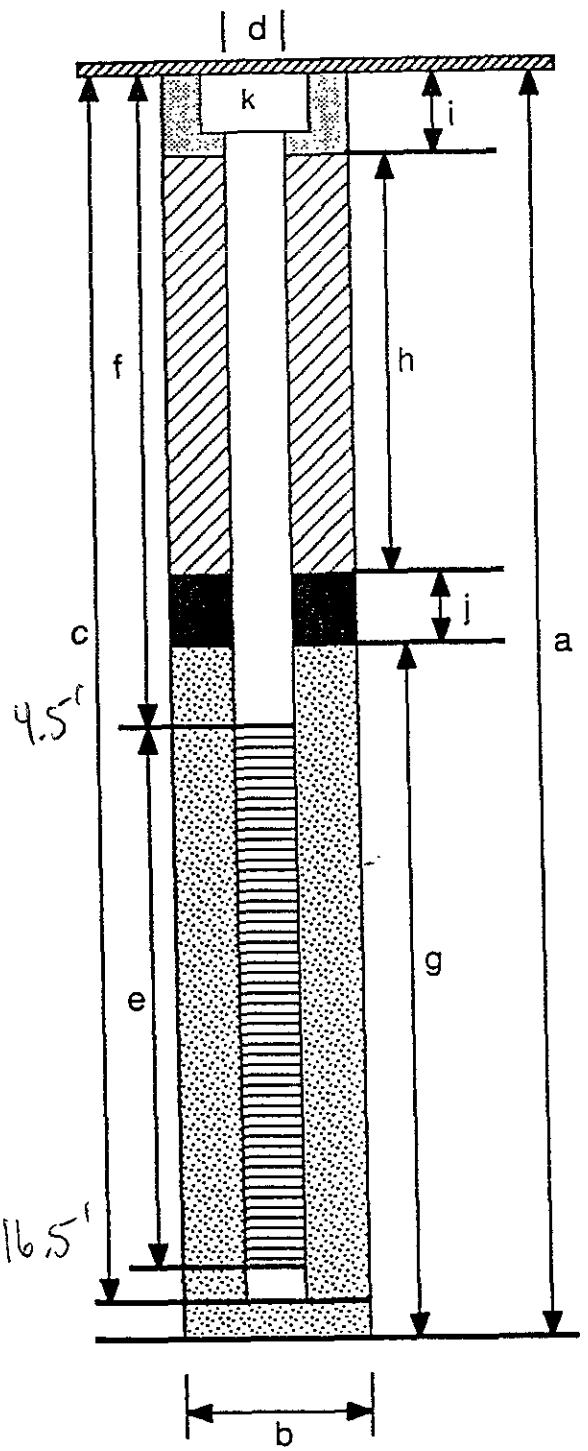
Reviewed by R.G./C.E.G. [signature] Figure No. A2

GROUNDWATER MONITORING WELL DATA

Boring/Well No. M-1	Project No. EJ-4065-1
Project Name SEA-LAND	
City/County Oakland/Alameda	
Well Permit No.	Depth to Water 6.0 feet



BORING DATA

Drilling Method: Hollow Stem Auger

(a) Total Depth (ft.): 17.5

(b) Diameter (in.): 8.0

MONITORING WELL DATA

Material: Schedule 40 PVC

(c) Casing Length (ft.): 16.5

(d) Diameter (in.): 2.0

Perforation Type: Machine Slot

(e) Perforated Length (ft): 12

Perforated Size (in.): 0.020

(f) Depth to Top Perforations (ft.): 4.5

Pack Material: 2/12 Sand

(g) Gravel Pack (ft.): 12.5

Backfill Material: Neat Cement

(h) Backfill (ft.): 2.5

Seal Material: Concrete

(i) Seal Surface (ft.): 1.0

Seal Material: Bentonite

(j) Seal (ft.): 0.5

(k) Vault box (water-tight), lock and expansion plug.

EARTH SYSTEMS ENVIRONMENTAL, INC.

Log of Exploratory Boring

DATE DRILLED: January 28, 1993
BORING DIAMETER: 8 inches
PROJECT NUMBER: EJ-4065-1
PROJECT NAME: SEA-LAND

BORING NO.: M-2
DEPTH TO GROUNDWATER: 6.0 feet
LOGGED BY: LDP

Blows Per Foot	Sample Number	Depth (ft)	U.S.C.S. Soil Group	SOIL DESCRIPTION	OVM (ppm)	Water Level
		0 –		4 inches asphaltic concrete pavement.		
		1 –	SP	Gravelly Fine SAND, light brown, angular to subrounded clasts, damp.		
		2 –	SM	Fine SAND with Silt, tan, medium dense, damp.		
		3 –				
		4 –				
27	2-1	5 –			0.1	▼
		6 –		Grades to gray color at 6 feet, shell fragments, wet.		
		7 –				
		8 –				
		9 –				
		10 –				
7	2-2	11 –		Becoming loose.	1.0	
		12 –				
		13 –				
		14 –				
		15 –	CL/CH	Silty CLAY (Bay Mud), dark gray, shell fragments, medium stiff, very moist.		
9	2-3	16 –		Boring terminated at 15.5 feet. Groundwater encountered at 6.0 feet.		
		17 –				
		18 –				
		19 –				
		20 –				

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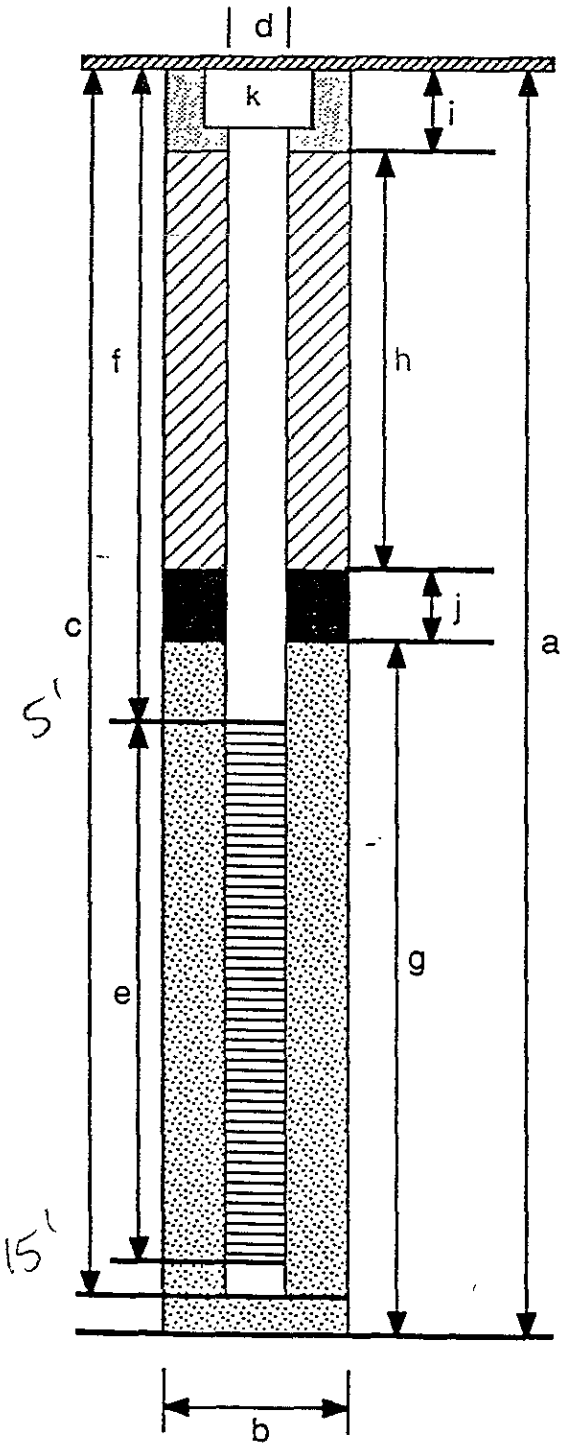
Reviewed by R.G./C.E.G. LDP Figure No. A3

GROUNDWATER MONITORING WELL DATA

Boring/Well No. M-2	Project No. EJ-4065-1
Project Name SEA-LAND	
City/County Oakland/Alameda	
Well Permit No.	Depth to Water 6.0 feet



BORING DATA

Drilling Method: Hollow Stem Auger

(a) Total Depth (ft.): 15.5

(b) Diameter (in.): 8.0

MONITORING WELL DATA

Material: Schedule 40 PVC

(c) Casing Length (ft.): 15.0

(d) Diameter (in.): 2.0

Perforation Type: Machine Slot

(e) Perforated Length (ft): 10

Perforated Size (in.): 0.020

(f) Depth to Top Perforations (ft.): 5.0

Pack Material: 2/12 Sand

(g) Gravel Pack (ft.): 11.0

Backfill Material: Neat Cement

(h) Backfill (ft.): 2.5

Seal Material: Concrete

(i) Seal Surface (ft.): 1.0

Seal Material: Bentonite

(j) Seal (ft.): 0.5

(k) Vault box (water-tight), lock and expansion plug.

EARTH SYSTEMS ENVIRONMENTAL, INC.

Log of Exploratory Boring

DATE DRILLED: January 28, 1993
BORING DIAMETER: 8 inches
PROJECT NUMBER: EJ-4065-1
PROJECT NAME: SEA-LAND

BORING NO.: M-3
DEPTH TO GROUNDWATER: 5.3 feet
LOGGED BY: LDP

Blows Per Foot	Sample Number	Depth (ft)	U.S.C.S. Soil Group	SOIL DESCRIPTION	OVM (ppm)	Water Level
		0 –		4 inches asphaltic concrete pavement 6 inches baserock.		
		1 –	SP	Fine SAND with Silt, tan, medium dense, damp.		
		2 –				
		3 –				
		4 –				
26	3-1	5 –		Wet.	0.5	▼
		6 –				
		7 –				
		8 –				
		9 –				
		10 –		Minor Gravelly CLAY interbeds, gray, shell fragments, loose.		
9	3-2	11 –			2.5	
		12 –				
		13 –				
		14 –				
		15 –	CH	Silty CLAY (Bay Mud), dark gray, medium stiff, moist.		
6	3-3	16 –				
		17 –		Boring terminated at 16.5 feet. Groundwater encountered at 5.3 feet.		
		18 –				
		19 –				
		20 –				

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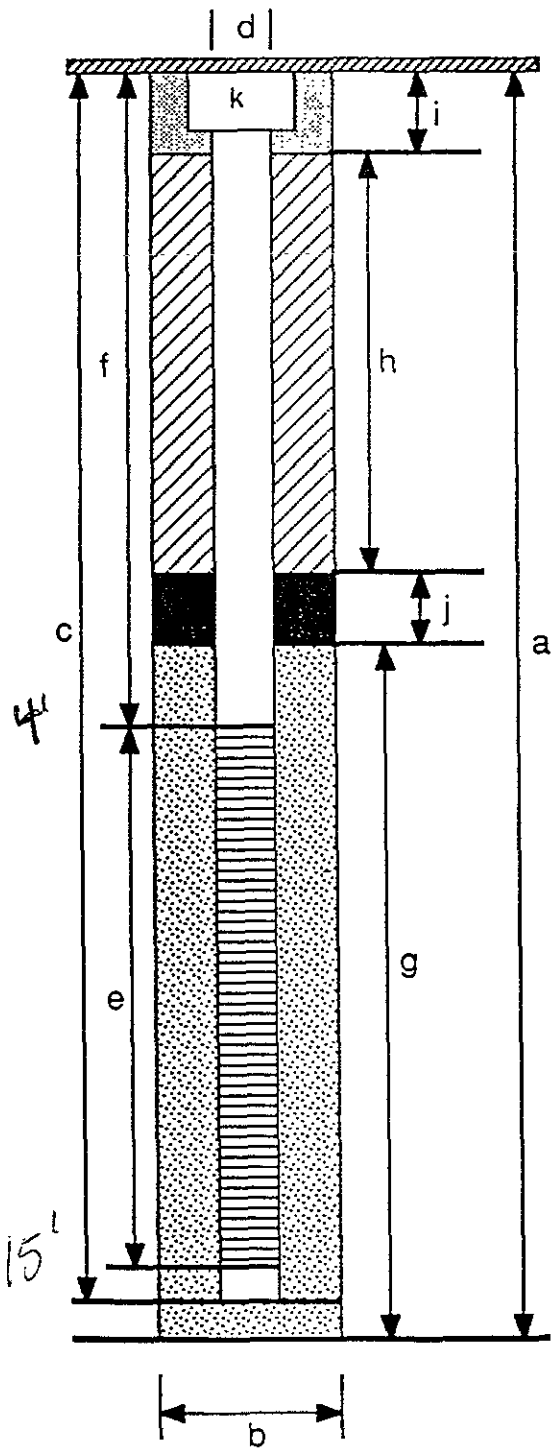
Figure No. A4

GROUNDWATER MONITORING WELL DATA

Boring/Well No. M-3	Project No. EJ-4065-1
Project Name SEA-LAND	
City/County Oakland/Alameda	
Well Permit No.	Depth to Water 5.3 feet



BORING DATA

Drilling Method: Hollow Stem Auger

(a) Total Depth (ft.): 16.5

(b) Diameter (in.): 8.0

MONITORING WELL DATA

Material: Schedule 40 PVC

(c) Casing Length (ft.): 15.0

(d) Diameter (in.): 2.0

Perforation Type: Machine Slot

(e) Perforated Length (ft): 11

Perforated Size (in.): 0.020

(f) Depth to Top Perforations (ft.): 4.0

Pack Material: 2/12 Sand

(g) Gravel Pack (ft.): 12.0

Backfill Material: Neat Cement

(h) Backfill (ft.): 1.0

Seal Material: Concrete

(i) Seal Surface (ft.): 1.5

Seal Material: Bentonite

(j) Seal (ft.): 0.5

(k) Vault box (water-tight), lock and expansion plug.

EARTH SYSTEMS ENVIRONMENTAL, INC.

Log of Exploratory Boring

DATE DRILLED: January 28, 1993
BORING DIAMETER: 8 inches
PROJECT NUMBER: EJ-4065-1
PROJECT NAME: SEA-LAND

BORING NO.: M-4
DEPTH TO GROUNDWATER: 5.7 feet
LOGGED BY: LDP

Blows Per Foot	Sample Number	Depth (ft)	U.S.C.S. Soil Group	SOIL DESCRIPTION	OVM (ppm)	Water Level
		0 –		4 inches asphaltic concrete pavement 6 inches baserock.		
		1 –	SP	Fine SAND with Silt, light brown, medium dense, damp.		
		2 –				
		3 –				
		4 –		Grades to light grayish brown.	0.5	
	4-1	5 –		Light gray, very moist to wet.		▼
		6 –				
		7 –				
		8 –				
		9 –		Light brown, minor fine Gravel, angular clasts.		
		10 –				
15	4-2	11 –		Gray.	0.3	
		12 –				
		13 –				
		14 –				
		15 –	CH	Silty CLAY (Bay Mud), dark gray, medium stiff, very moist.		
5	4-3	16 –			0.1	
		17 –		Boring terminated at 16.5 feet. Groundwater encountered at 5.7 feet.		
		18 –				
		19 –				
		20 –				

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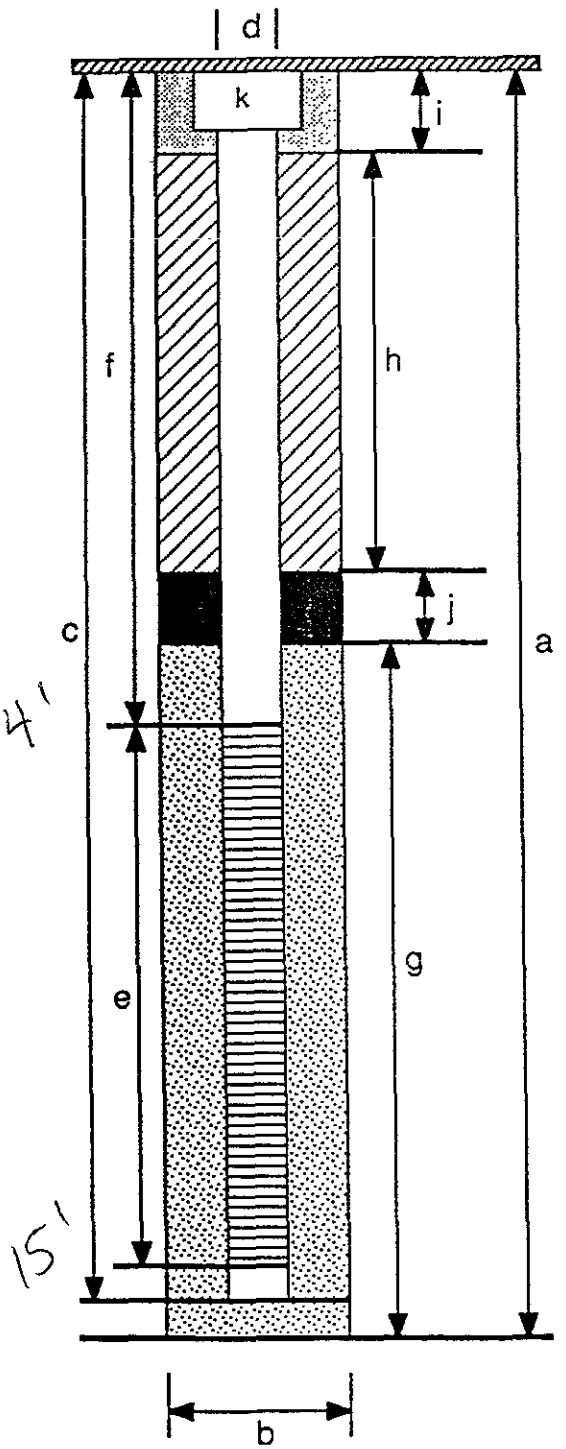
Figure No. A5

GROUNDWATER MONITORING WELL DATA

Boring/Well No. M-4	Project No. EJ-4065-1
Project Name SEA-LAND	
City/County Oakland/Alameda	
Well Permit No. 93008	Depth to Water 5.7 feet



BORING DATA

Drilling Method: Hollow Stem Auger

(a) Total Depth (ft.): 16.5

(b) Diameter (in.): 8.0

MONITORING WELL DATA

Material: Schedule 40 PVC

(c) Casing Length (ft.): 15.0

(d) Diameter (in.): 2.0

Perforation Type: Machine Slot

(e) Perforated Length (ft): 11

Perforated Size (in.): 0.020

(f) Depth to Top Perforations (ft.): 4.0

Pack Material: 2/12 Sand

(g) Gravel Pack (ft.): 12.0

Backfill Material: Neat Cement

(h) Backfill (ft.): 1.5

Seal Material: Concrete

(i) Seal Surface (ft.): 1.0

Seal Material: Bentonite

(j) Seal (ft.): 0.5

(k) Vault box (water-tight), lock and expansion plug.

EARTH SYSTEMS ENVIRONMENTAL, INC.

Appendix B

Key to Exploratory Boring Log for Well Destruction and Installation

DATE DRILLED: October 25, 1993
BORING DIAMETER: 12 inches
PROJECT NUMBER: NJL-4065-03
PROJECT NAME: Sea-Land

BORING NO.: Key
DEPTH TO GROUNDWATER: 6.1 feet
LOGGED BY: PJR
DRILLING METHOD: Hollow Stem

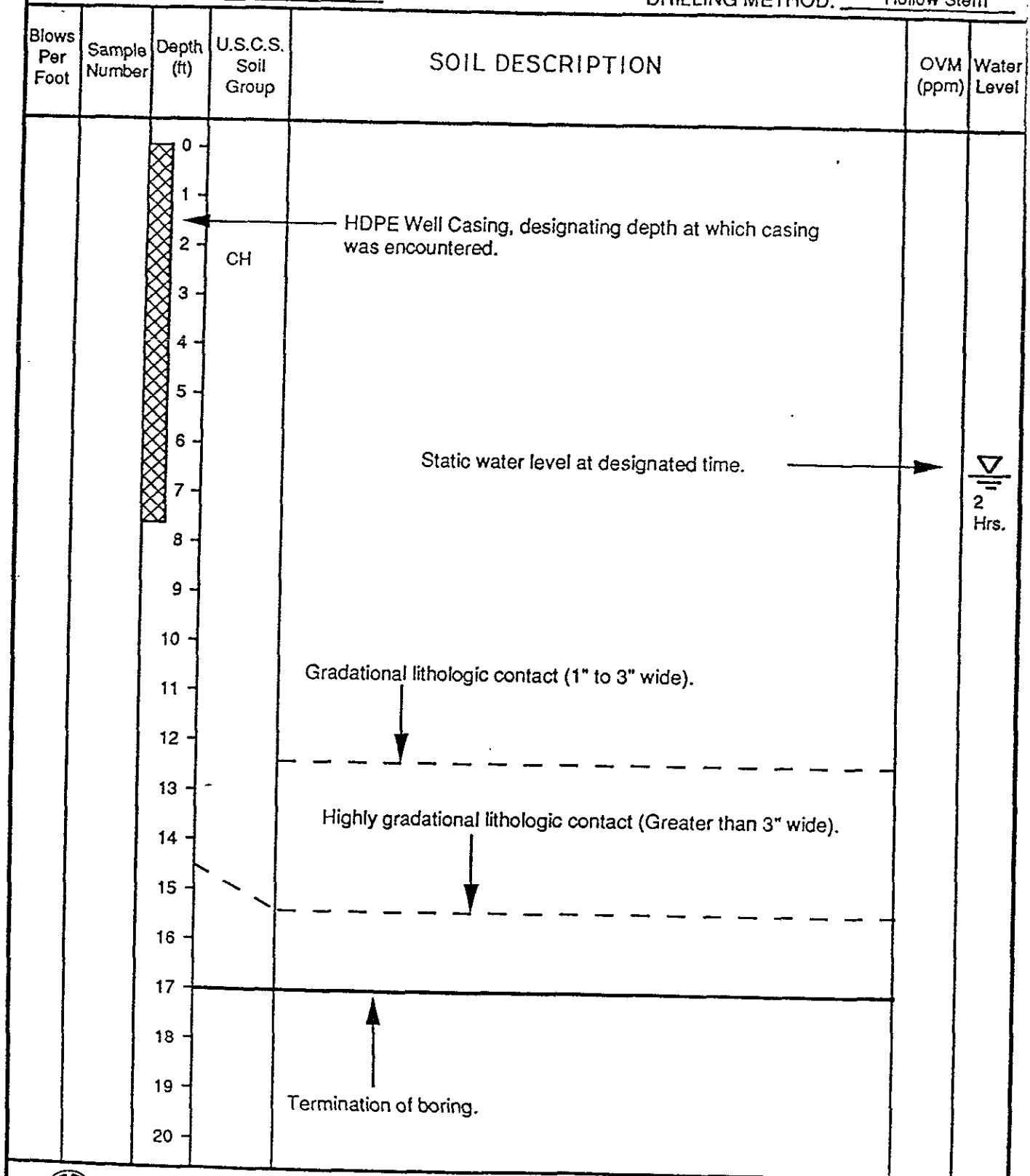


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Figure No. B-1

Log of Exploratory Boring

DATE DRILLED: October 25, 1993
BORING DIAMETER: 12 inches
PROJECT NUMBER: NJL-4065-03
PROJECT NAME: Sea-Land

BORING NO.: MW-5 / EW-5
DEPTH TO GROUNDWATER: 6.1 feet
LOGGED BY: PJR
DRILLING METHOD: Hollow stem

Blows Per Foot	Sample Number	Depth (ft)	U.S.C.S. Soil Group		OVM (ppm)	Water Level
		0		Approximately 4 to 6 inches ASPHALT.		
		1		Class II AGGREGATE BACKFILL and Class III DRAIN ROCK.		
		2				
		3				
		4				
		5				
		6		Groundwater at 6.1 feet prior to drilling.		▽
		7				
		8				
		9				
		10		SILTY CLAY, mottled dark gray to dark greenish gray, scattered shell fragments, plastic, soft, wet.		
		11				
		12				
		13				
		14				
		15		Boring terminated at 15 feet. Groundwater encountered at 6.1 feet.		
		16				
		17				
		18				
		19				
		20				

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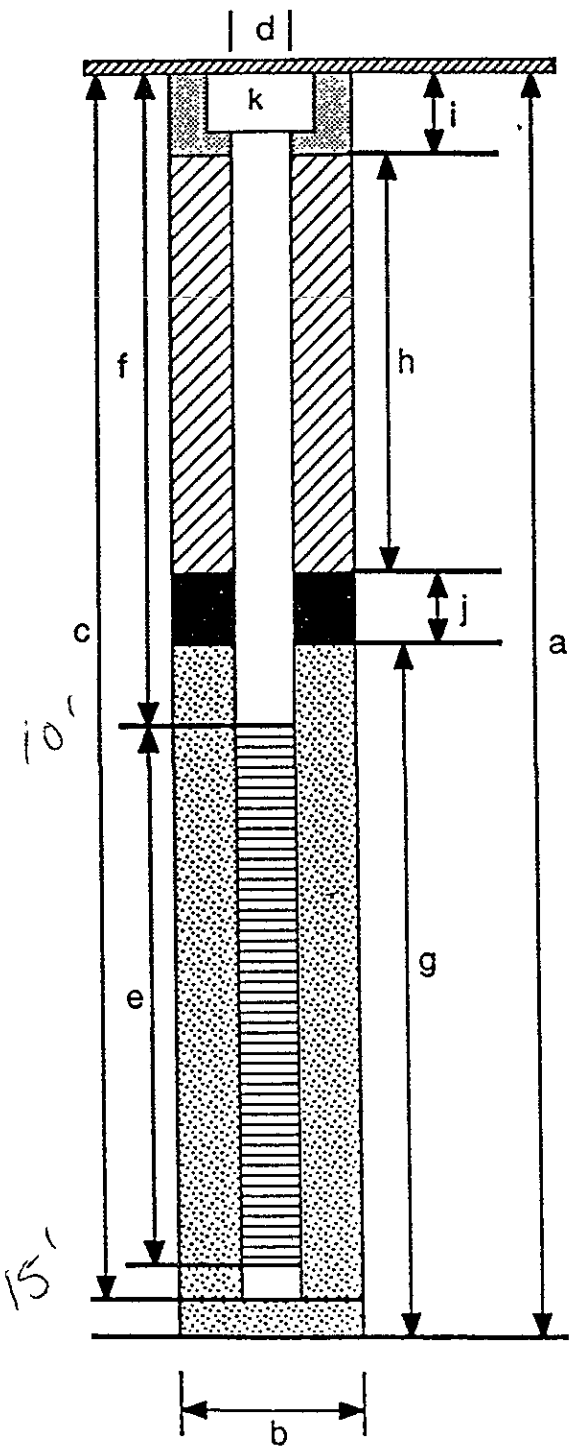
Figure No. B-2

GROUNDWATER EXTRACTION WELL DATA

Boring/Well No.: EW-1	Project No.: NJL-4065-03
Project Name: Sea-Land	Date: October 25, 1993
Address: 1425 Maritime Street, Oakland, California	
Permit No.: 93587	Depth to Water (ft): 6.1



BORING DATA

Drilling Method: Hollow Stem

(a) Total Depth (ft.): 15

(b) Diameter (in.): 12

MONITORING WELL DATA

Material: Schedule 40 PVC

(c) Casing Length (ft.): 15

(d) Diameter (in.): 6

Perforation Type: Factory slotted

(e) Perforated Length (ft): 5

Perforated Size (in.): 0.020

(f) Depth to Top Perforations (ft.): 10

(g) Gravel Pack (ft.): 10

Material: Lonestar #2/12

(h) Backfill (ft.): 3

Backfill Material: Neat cement grout

(i) Surface Seal (ft.): 1.0

Seal Material: Concrete

(j) Seal (ft.): 2

Seal Material: Bentonite chips

(k) Christy box (water-tight), locking well cap.

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