

ALAMEDA COUNTY  
**HEALTH CARE SERVICES  
AGENCY**

ALEX BRISCOE, Agency Director



DEPARTMENT OF ENVIRONMENTAL HEALTH  
OFFICE OF THE DIRECTOR  
1131 HARBOR BAY PARKWAY  
ALAMEDA, CA 94502  
(510) 567-6777  
FAX (510) 337-9135

June 23, 2010

Thomas LaFlamme  
Address Unknown

Christopher Wilson  
CalTrans  
P.O. Box 7444  
San Francisco, CA 94120

**REMEDIAL ACTION COMPLETION CERTIFICATE**

Subject: Fuel Leak Case No. RO0000126 and GeoTracker Global ID T0600100964, Thomas Short Company, 3430 Wood Street, Oakland, CA 94607

Dear Mr. LaFlamme & Mr. Wilson:

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

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Ariu Levi".

Ariu Levi  
Director  
Alameda County Environmental Health

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

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Subject: Fuel Leak Case No. RO0000126 and GeoTracker Global ID T0600100964, Thomas Short Company, 3430 Wood Street, Oakland, CA 94607

Dear Mr. LaFlamme & Mr. Wilson:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- Residual pollution remaining in soil beneath the site includes TPH as diesel and total recoverable petroleum hydrocarbons at concentrations of 1,670 mg/kg and 1,500 mg/kg, respectively.
- Fuel oxygenates other than MTBE were not analyzed.

If you have any questions, please call Paresh Khatri at (510) 777-2478. Thank you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Donna L. Drogos".

Donna L. Drogos, P.E.  
Division Chief

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

cc:

Ms. Cherie McCaulou (w/enc)  
SF- Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Closure Unit (w/enc)  
State Water Resources Control Board  
UST Cleanup Fund  
P.O. Box 944212  
Sacramento, CA 94244-2120

Paresh Khatri (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

**CASE CLOSURE SUMMARY  
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

**I. AGENCY INFORMATION**

Date: April 15, 2010

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 777-2478
Responsible Staff Person: Paresh Khatri	Title: Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Thomas A Short Company		
Site Facility Address: 3430 Wood Street, Oakland, California 94607		
RB Case No.: 01-1045	StdID.: 386	LOP Case No.: RO0000126
URF Filing Date: ---	Global ID No.: T06019703363	APN: 7-605-1-21
<b>Responsible Parties</b>	<b>Addresses</b>	<b>Phone Numbers</b>
Thomas LaFlamme	Unknown	
Caltrans c/o Christopher Wilson	P.O. Box 7444 San Francisco, CA 94120	

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1 x 4,000-gallon	Gasoline	Removed	1/28/1993
2	1 x 1,000-gallon	Diesel	Removed	1/28/1993
---	---	---	---	---
---	---	---	---	---
Piping			Removed	1/28/1993

**III. RELEASE AND SITE CHARACTERIZATION INFORMATION**

Cause and Type of Release: Unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: ---	
Monitoring wells installed? Yes	Number: 3	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 8.03	Lowest Depth: 16.5 ft bgs	Flow Direction: Gradient is flat, but assumed westerly
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: One irrigation well was identified approximately 1,800 feet northwest of the subject site at 4200 Park Avenue in Emeryville. The total depth of this well is 427 feet. However, this well does not appear to be a receptor due to its location and distance from the site.

Are drinking water wells affected? No	Aquifer Name: East Bay Plain Groundwater Basin
Is surface water affected? No	Nearest SW Name: San Francisco Bay
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

### TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	One 1,000-gallon One 4,000-gallon	Disposal, Erickson Facility, Richmond, CA	1/28/1993
Piping	Unknown	Disposal, unknown location	1/28/1993
Free Product	NA	---	---
Soil	Unknown	---	1/29/1993
Groundwater	---	---	---

### MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP

(Please see Attachments for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	14,000 (TSC/B-2-5, 6/23/1992)	19 (E-1, 1/29/1993)	16,000 (TSC/H-1, 6/23/1992)	3,600 (MW-5, 4/5/2004)
TPH (Diesel)	700 (TSC/B-2-5, 6/23/1992)	1,670 (MW-3 @1', 11/1996)	NA	4,000 (MW-5, 4/5/2004)
TPH (Motor Oil)	NA	1,500 <sup>5</sup> (MW-3 @1', 11/1996)	NA	NA
Benzene	1.4 (TSC/B-1-5, 6/23/1992)	0.314 (MW-3 @1', 11/1996)	320 (TSC/H-1, 6/23/1992)	67 (MW-5, 4/5/2004)
Toluene	10 (TSC/B-2-5, 6/23/1992)	1.2 (MW-3 @1', 11/1996)	100 (TSC/H-1, 6/23/1992)	<20 (MW-5, 4/5/2004)
Ethylbenzene	8.3 (TSC/B-2-13.5, 6/23/1992)	0.955 (MW-3 @1', 11/1996)	380 (TSC/H-1, 6/23/1992)	<20 (MW-5, 4/5/2004)
Xylenes	60 (TSC/B-2-5, 6/23/1992)	1.180 (MW-3 @1', 11/1996)	380 (TSC/H-1, 6/23/1992)	<40 (MW-5, 4/5/2004)
MTBE	NA <sup>4</sup>	NA <sup>3</sup>	NA <sup>2</sup>	<2 <sup>1</sup> (MW-5, 10/17/2002)
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	NA	NA	NA	NA
Other (8240/8270)	NA	NA	NA	NA

<sup>1</sup> Other VOCs analyzed (groundwater µg/L after cleanup): <2 µg/L MtBE, NA TBA, NA DIPE, NA ETBE, NA TAME, NA EDB, NA 1,2-DCA

<sup>2</sup> Other VOCs not analyzed (groundwater ppb before cleanup): MtBE, TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, EtOH

<sup>3</sup> Other VOCs (Soil mg/kg after cleanup): TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA

<sup>4</sup> Other VOCs not analyzed (Soil mg/kg before cleanup): MtBE, TBA, DIPE, ETBE, TAME, EDB, 1,2-DCA, EtOH

<sup>5</sup> Total Recoverable Petroleum Hydrocarbons

NA - Not Analyzed

#### Site History and Description of Corrective Actions:

The Thomas A Short Company (the subject site) is located at 3430 Wood Street in Oakland, California, (**Figure 1**). Land use in the immediate vicinity in 1992 was commercial. However, the site was part of the Cypress Freeway reconstruction and Interstate 880 is currently located above the site (**Figure 2**).

On June 23 and 25, 1992, four soil borings were installed near the existing USTs. Concentrations of TPH-g and benzene up to 14,000 mg/kg and 1.4 mg/kg, respectively, were detected in soil samples and concentrations of TPH-g and benzene up to 16,000 µg/L and 320 µg/L, respectively, were detected in groundwater samples. Analytical results are summarized on **Table 1** and sample locations are illustrated on **Figure 3**.

On January 28, 1993, one 4,000-gallon gasoline and one 1,000-gallon diesel USTs were removed from the site. Soil sample analytical results detected TPH-g at 49 mg/kg, and benzene at 0.027 mg/kg, with TPH-d not detected above the laboratory detection limit. Due to minor petroleum staining in soil and the presence of petroleum odors, over-excavation was conducted at the site on January 29, 1993. Soil sample analytical results detected TPH-g at 19 mg/kg, and benzene at 0.031 mg/kg, with TPH-d not detected above the laboratory detection limit. Analytical results are summarized on **Table 2** and sample locations are illustrated on **Figure 4**.

To verify remediation effectiveness, groundwater monitoring was initiated at the site following additional well installations in February 1993. This site was subsequently purchased by Caltrans on May 10, 1994 and the site was included in the Cypress Reconstruction Project overseen by the California Department of Toxic Substances Control (DTSC) under their voluntary cleanup program. On January 9, 2004, the Cypress project was Certified by the DTSC and groundwater monitoring was discontinued at the site in June 2004. Soil and groundwater sampling analytical data are summarized on **Tables 3 and 4**.

#### Geology & Hydrogeology:

The site is located within the East Bay Plain Groundwater Basin in Alameda County, at an elevation of approximately 10 feet underneath Interstate 880 in Oakland. The San Francisco Bay is located approximately ¼ mile to the northwest of the site.

According to Geo Resource Consultants, the subsurface materials encountered in the onsite borings consisted predominantly light brown to black silty clay with the exception of TSC/A-1 and TSC/A-2 where gravelly sandy clay was encountered from the surface to a depth of approximately 3.5 feet. Wet conditions were generally observed at approximately 7 feet bgs and groundwater was encountered at approximately 12 feet bgs.

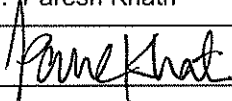
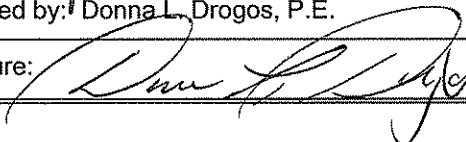
**IV. CLOSURE**

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? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a significant risk to human health based upon current land use and conditions.		
<p>Site Management Requirements: Case closure for this fuel leak site is granted for the current industrial land use only. If a change in land use to any residential or other conservative land use scenario is proposed at this site, Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the case upon receipt of approved development/construction plans.</p> <p>Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party (or current property owner/developer) prior to and during excavation and construction activities.</p> <p>This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.</p>		
Should corrective action be reviewed if land use changes? Yes.		
Was a deed restriction or deed notification filed? No	Date Recorded: --	
Monitoring Wells Decommissioned: --	Number Decommissioned: --	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: --		

**V. ADDITIONAL COMMENTS, DATA, ETC.**

<p>Considerations and/or Variances:</p> <ul style="list-style-type: none"> <li>Residual hydrocarbons in soil at concentrations of 1,670 mg/kg TPH-d and 1500 mg/kg TRPH remains at the site.</li> <li>Fuel oxygenates other than MTBE were not analyzed.</li> </ul> <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significantly threat to water resources, public health and safety, and the environment under the current industrial land use based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary unless a change in land use to any residential or other conservative land use scenario occurs at the site. ACEH staff recommend closure for the site.</p>
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**VI. LOCAL AGENCY REPRESENTATIVE DATA**

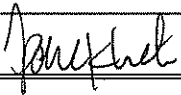
Prepared by: Paresh Khatri	Title: Hazardous Materials Specialist
Signature: 	Date: March 9, 2010
Approved by: Donna L. Drogos, P.E.	Title: Chief
Signature: 	Date:

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

### VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: April 21, 2010	

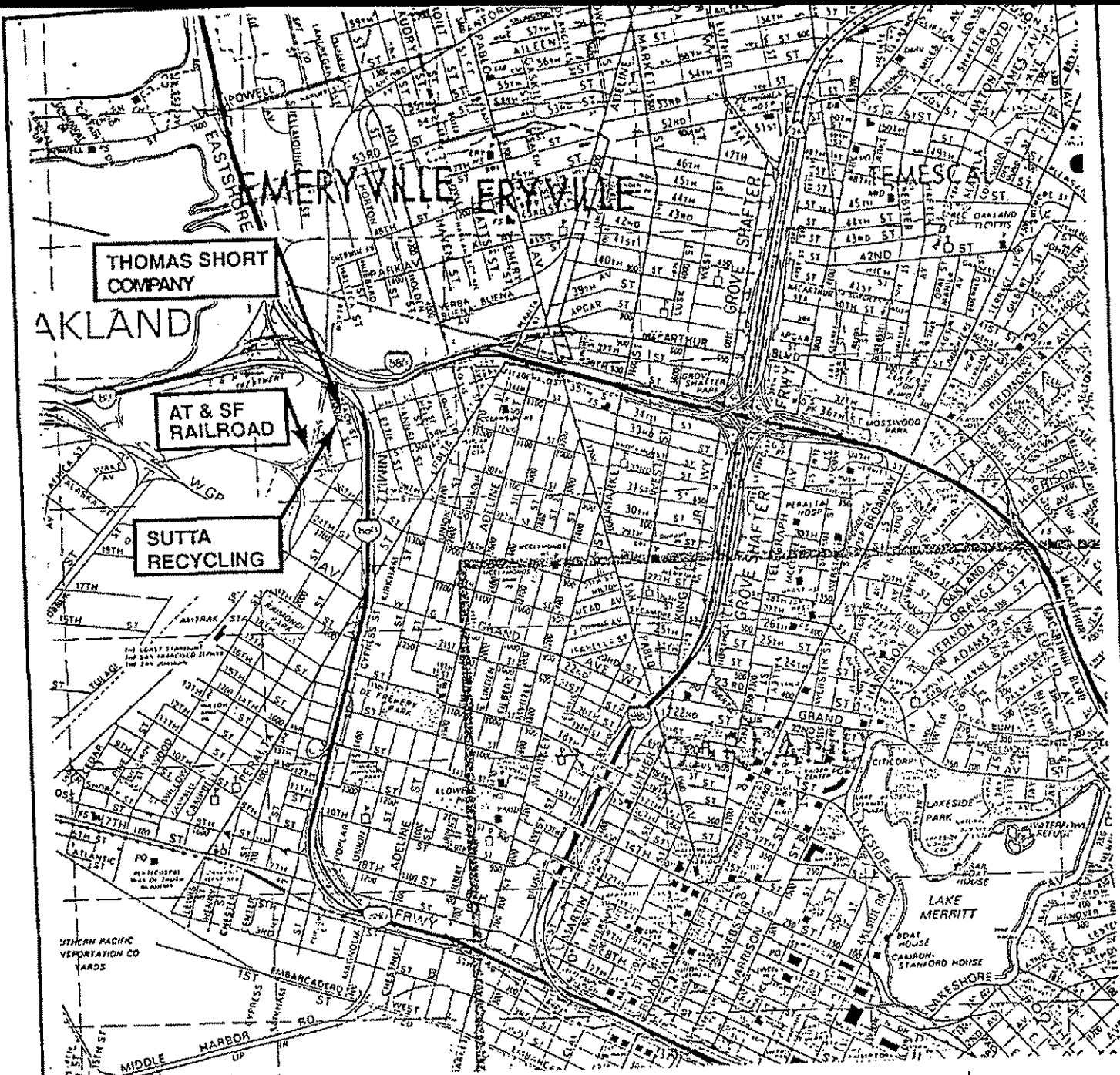
### VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH:	Date of Well Decommissioning Report:	
All Monitoring Wells Decommissioned: No	Number Decommissioned:	Number Retained:
Reason Wells Retained:		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: 	Date: 6/23/2010	

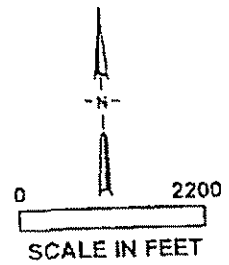
Attachments:

1. Site Figures 1 through 4
2. Analytical Tables 1 through 4
3. Boring Logs (9 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.



REFERENCE :Thomas Bros Maps.  
Alameda, Contra Costa Counties



**Geo/Resource Consultants, Inc.**  
GEOLOGISTS / ENGINEERS / ENVIRONMENTAL SCIENTISTS  
505 BEACH STREET, SAN FRANCISCO, CALIFORNIA 94133

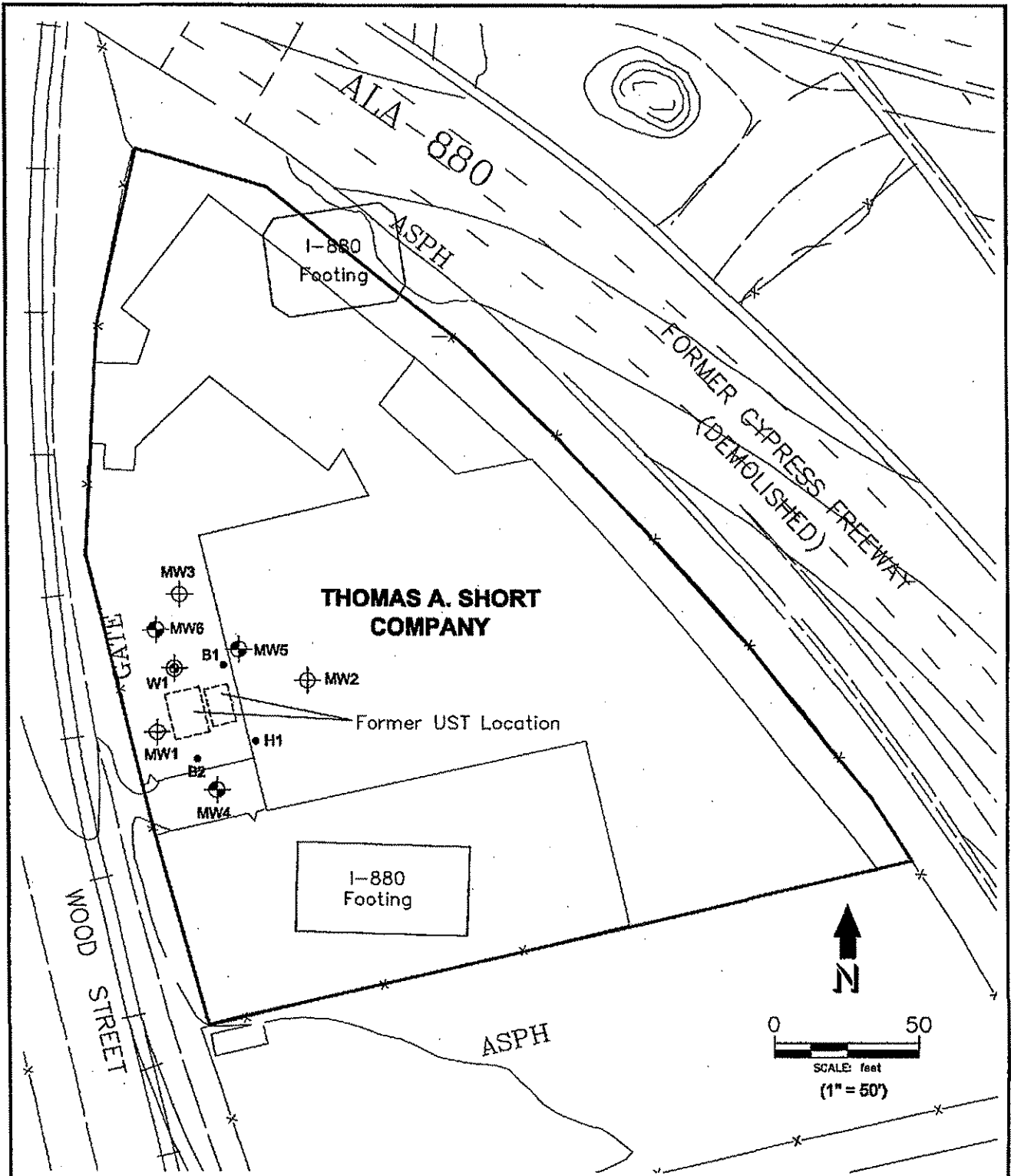
**VICINITY MAP - AREA 5**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE





1

Job No. 1689-019-00 Appr. AT Date 7/23/92





**Legend:**

- MW5  Monitoring Well Location (Gecon, May 2000)
- MW2  Monitoring Well Location (Gecon, 1996)
- W1  Existing Well to be Abandoned
- B1  Previous Boring Location

**GEOCON**  
CONSULTANTS INC.

2358 RESEARCH DRIVE, LIVERMORE, CALIFORNIA, 94550  
PHONE 925 371-5900 - FAX 925 371-5915



Former Thomas A. Short Company Property

3430 Wood Street  
Oakland, California

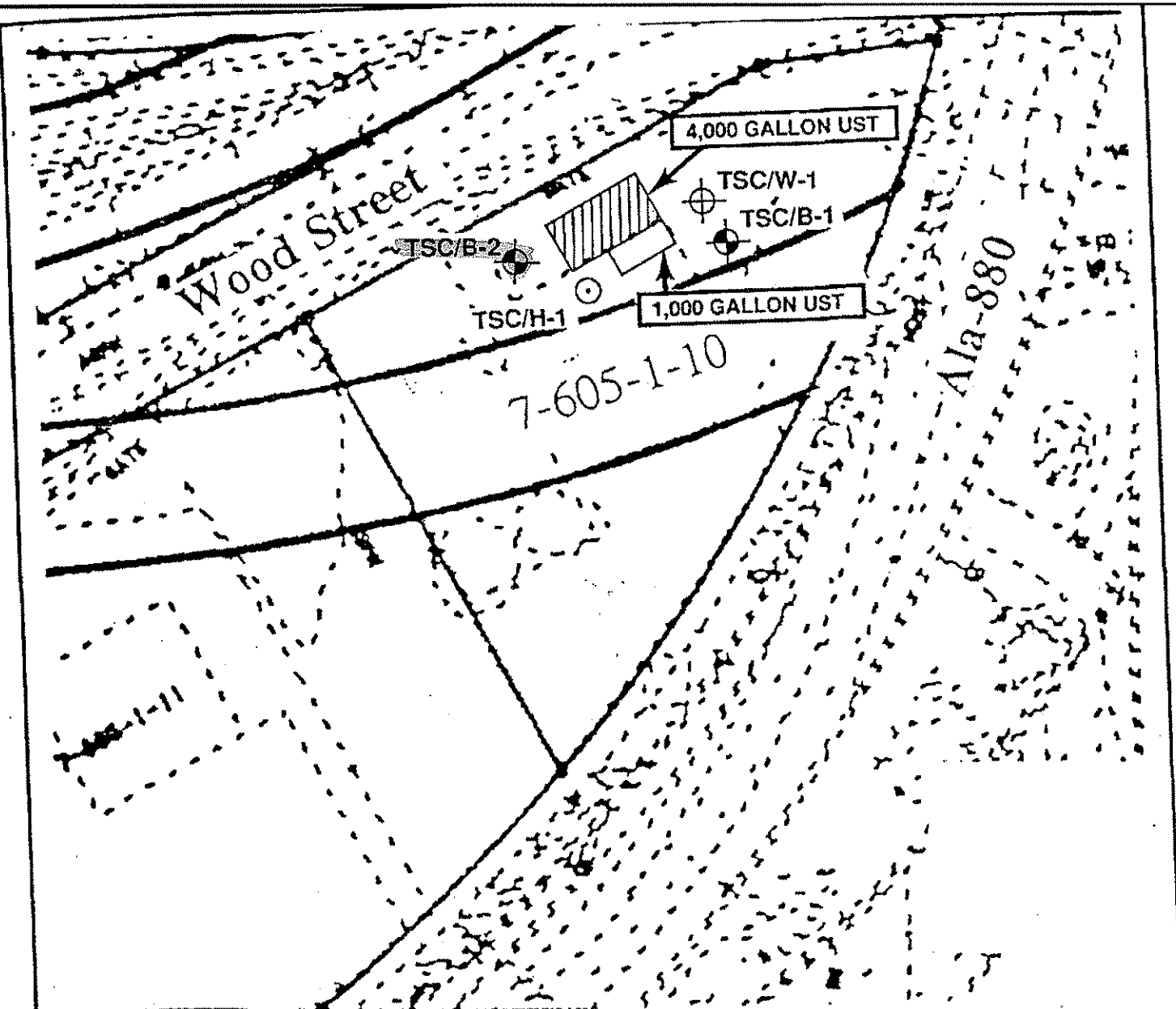
**SITE PLAN**

GEOCON Proj. No. S8225-06-103

Task Order No. 04-190270-RM

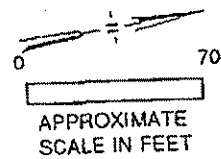
June 2001

Figure 2



Reference : Caltrans, May 4, 1992

EXPLANATION	
TSC/B-1 ●	Boring Location
TSC/H-1 ⊙	Boring/Hydropunch Location
TSC/W-1 ⊕	Monitoring Well Location



**Geo/Resource Consultants, Inc.**  
GEOLOGISTS / ENGINEERS / ENVIRONMENTAL SCIENTISTS  
505 BEACH STREET, SAN FRANCISCO, CALIFORNIA 94133

Job No. 1689-019-00 Appr. \_\_\_\_\_ Date 7/21/92

SITE PLAN - AREA 5  
THOMAS A. SHORT COMPANY - PARCEL 21  
D.O.T. - INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE

3

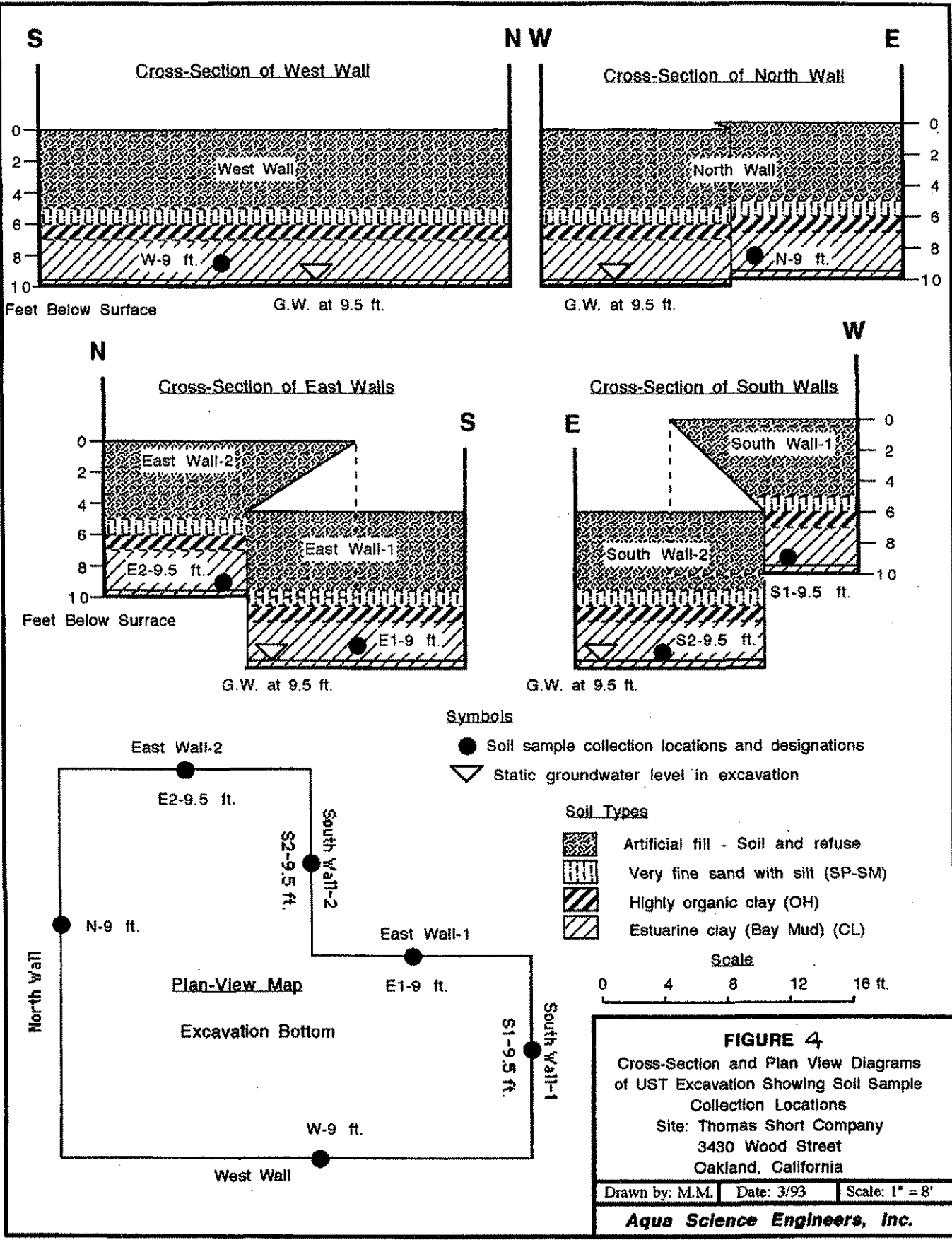


TABLE 1  
 AREA 5  
 DOT - CYPRESS  
 SUMMARY OF ANALYTICAL RESULTS - SOIL

PPM

GENERAL  
 PPB

UNITS EPA No.	TPH mg/kg 11871	TPH-G mg/kg 8015m	TPH-D mg/kg 8015m	BENZENE ug/kg 8020	STOLUENE ug/kg 8020	ETHYL BENZENE ug/kg 8020	XYLENES ug/kg 8020	VOLEATILE ORGANICS ug/kg 8240
<b>THOMAS A. SHORT CO.</b>								
<b>-Hand Auger</b>								
TSC/A-1-1	6,600(150)	-	-	-	-	-	-	-
TSC/A-2-1.5	66	-	-	-	-	-	-	-
TSC/A-2-3	180	-	-	-	-	-	-	-
<b>-Boring</b>								
TSC/B-1-5	-	1,500(500)	520	1,400(500)	2,400(500)	4,500(500)	8,400(500)	-
TSC/B-1-8	-	ND	ND	35	7	ND	ND	-
TSC/B1-13.5	-	ND	ND	20	7	10	30	-
TSC/B-2-5	-	14,000(500)	700	500(500)	10,000(500)	8,000(500)	60,000(500)	-
TSC/B-2-8	-	ND	ND	210	5	ND	ND	-
TSC/B-2-13.5	-	1,700(500)	ND	1,000(500)	1,500(500)	8,300(500)	36,000(500)	-
<b>-Hydropunch</b>								
TSC/H-1-2	-	ND	ND	ND	ND	ND	ND	-
TSC/H-1-5	-	ND	ND	ND	ND	ND	ND	-
TSC/H-1-8	-	6	ND	230	80	200	420	-
<b>-Well</b>								
TSC/W-1-5	-	ND	ND	10	ND	15	ND	-
TSC/W-1-8	-	ND	ND	ND	ND	ND	ND	-
TSC/W-1-14	-	24	ND	10	7	70	110	-

PRIOR TO  
 LST RECOVERYS

TABLE 1

EPA METHOD 5030/Mod. 8015  
 TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

CLIENT:	Geo/Reosource	DATE REC'D:	07/02/92
PROJECT:	Dot Cypress	DATE ANALYZED:	07/06/92
CONTROL NO:	N9207-03	MATRIX:	Water

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> <u>(mg/L)</u>	<u>DET. LIMIT</u> <u>(mg/L)</u>	<u>% SURRO</u> <u>RECOVERY</u>
TSC-W-1	N9207-03-1	1.3	1.0	80
<del>TSC-W-1</del>	<del>N9207-03-2</del>	<del>ND</del>	<del>1.0</del>	<del>65</del>

TABLE 1

EPA METHOD 5030/Mod. 8015  
 TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

CLIENT:	Geo/Resource	DATE REC'D:	06/26/92
PROJECT:	Dot Cypress	DATE ANALYZED:	06/29/92
CONTROL NO:	N9206-29	MATRIX:	Water

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS</u> (mg/L)	<u>DET. LIMIT</u> (mg/L)	<u>% SURRO</u> <u>RECOVERY</u>
TSC/H-1	N9206-29-5	16	1.0	96

TABLE 1

EPA METHOD - 8020  
BTEX

```

=====
CLIENT:      Geo/Resource          DATE REC'D:   06/26/92
PROJECT:     Dot Cypress            DATE ANALYZED: 06/29/92
CONTROL NO:  N9206/29             MATRIX TYPE:  Water
=====
  
```

<u>SAMPLE ID:</u>	<u>CONTROL NO:</u>	<u>RESULTS (ug/L)</u>				<u>% SURRO</u>
		<u>Benz</u>	<u>Tol</u>	<u>Et Benz</u>	<u>Xyls</u>	
TSC/H-1	N9206-29-5	320	100	380	380	96
<u>DETECTION LIMIT</u>		1	1	1	1	

TABLE 1

EPA METHOD - 8020  
BTEX

```

=====
CLIENT:      Geo/Resource          DATE REC'D:   07/02/92
PROJECT:     Dot Cypress             DATE ANALYZED: 07/06/92
CONTROL NO:  N9207-03            MATRIX TYPE:  Water
=====
  
```

```

=====
          RESULTS (ug/L)   % SURRO
SAMPLE ID:  CONTROL NO:  Benz  Tol  Et Benz  Xyls  RECOVERY
TSC-W-1    N9207-03-1   80    6    ND     15    80
DETECTION LIMIT          1    1    1    1
=====
  
```



TABLE 2

For locations of these sample locations, see Figure 3 - Sampling Plan. The soil samples listed above were collected by use of the backhoe bucket, then a 2" x 6" brass sample tube was inserted to collect a sample. The soil samples were secured using aluminum foil, capped, and sealed with tape and transported directly to the analyzing laboratory under proper chain of custody procedures. The stockpile samples (STKP-E and STKP-W) were composited by the laboratory. The composite sample consisted of four (4) discrete samples which were combined by the lab to form one (1) sample for analysis. Samples were submitted for analysis to the state certified laboratory, Priority Environmental Labs in Milpitas, California (DHS No. 1708). The soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) as Gasoline (EPA 5030/8015), TPH as Diesel (EPA 3550/8015), the fractions BTEX (EPA 8020), and Total Extractable Lead (EPA 7420). Analysis results are shown below (Table Two) and copies can be found in Appendix A. ✓

TABLE TWO  
EXCAVATION PIT SOIL SAMPLE RESULTS

Sample ID	TPH Gasoline (ppm)	TPH Diesel (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	Lead (ppm)
<i>UST Removal 1-28</i> { GSWN? } Gas	2.6 ✓	N.D. ✓	<del>0.005</del> 8.4	8.4	10	25	6.3 ✓
{ GSWS } Gas	3.5 ✓	N.D. ✓	<del>0.0071</del> 10	10	14	32	10 ✓
{ DSB-1 } Diesel	49 ✓	N.D. ✓	<del>0.027</del> 49	49	65	240	10 ✓
{ DSB-2 } Diesel	17 ✓	N.D. ✓	<del>0.018</del> 26	26	37	130	8.9 ✓
{ E-1 } Diesel	19 ✓	N.D. ✓	<del>0.031</del> 88	88	160	280	15 ✓
{ E-2 } Diesel	5.4 ✓	N.D. ✓	<del>0.005</del> 15	15	21	61	14 ✓
{ N } Diesel	3.3 ✓	N.D. ✓	<del>0.005</del> 13	13	18	48	15 ✓
{ S-1 } Diesel	13 ✓	N.D. ✓	<del>0.009</del> 122	122	37	89	10 ✓
{ S-2 } Diesel	10 ✓	N.D. ✓	<del>0.006</del> 216	216	17	84	9.8 ✓
{ W } Diesel	1.8 ✓	N.D. ✓	N.D.	6.2	12	24	14 ✓
STKP-E*	<del>28</del>	28 ✓	<del>180</del> 180	250	480	1900	<del>140</del> 140
STKP-W*	<del>160</del>	N.D. ✓	<del>160</del> 160	160	320	990	<del>140</del>
EPA METHOD	5030/ 8015	3550/ 8015	8020	8020	8020	8020	7420

\* - Composited sample (performed at the lab)  
 ND - Non Detectable at analytical method limits  
 ppm - parts per million  
 ppb - parts per billion

**TABLE 3**  
**SUMMARY OF SOIL ANALYTICAL DATA**  
**Former Thomas A. Short Company**  
**Oakland, California**

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPHg	TPHd	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead		
				mg/kg			ug/kg																
H-1	Jun-92	0.6	2	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	
		1.5	5	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
		2.4	8	--	6	ND	230	80	200	420	--	--	--	--	--	--	--	--	--	--	--	--	--
W-1	Jun-92	1.5	5	--	ND	ND	10	ND	15	ND	--	--	--	--	--	--	--	--	--	--	--	--	
		2.4	8	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
		4.3	14	--	24	ND	10	7	70	110	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	Nov-96	0.3	1	45	<1	194	<5	<5	<5	<5	18	--	--	--	--	--	--	--	--	--	--	35	
		1.5	5	43	<1	27	<5	<5	<5	<5	14	--	--	--	--	--	--	--	--	--	--	44	
		3.0	10	12	<1	2.7	<5	<5	<5	<5	5.1	--	--	--	--	--	--	--	--	--	--	4.4	

**TABLE 3**  
**SUMMARY OF SOIL ANALYTICAL DATA**  
**Former Thomas A. Short Company**  
**Oakland, California**

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPH <sub>g</sub>	TPH <sub>d</sub>	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead		
				mg/kg			ug/kg																
MW-2	Nov-96	0.3	1	370	<1	309	<5	<5	<5	<5	13	--	--	--	--	--	--	--	--	--	--	40	
		1.5	5	360	6.0	44	<5	<5	<5	<5	<5	--	--	--	--	--	--	--	--	--	--	--	542
		3.0	10	12	<1	<1.0	<5	<5	<5	<5	15	--	--	--	--	--	--	--	--	--	--	--	4.6
MW-3	Nov-96	0.3	1	1500	<1	1,670	<5	<5	<5	<5	21	--	--	--	--	--	--	--	--	--	--	6.7	
		1.5	5	356	<1	526	<5	<5	<5	<5	45	--	--	--	--	--	--	--	--	--	--	--	18
		3.0	10	50	43	1.4	314	1,220	955	1,180	7.4	--	--	--	--	--	--	--	--	--	--	--	4.8
MW-4	May-00	1.5	5	--	<1	1.2	<5	<5	<5	<5	<5	--	--	--	--	--	--	--	--	--	--	4	
		3.0	10	--	3	1.4	107	12	253	218	<5	158	<5	<5	14	<5	8.2	8.7	47	14	14		

**TABLE 3**  
**SUMMARY OF SOIL ANALYTICAL DATA**  
**Former Thomas A. Short Company**  
**Oakland, California**

Sample No.	Date Collected	Depth (m)	Depth (ft)	TRPH	TPHg	TPHd	benzene	toluene	ethylbenzene	xylenes	methylene chloride	n-butylbenzene	sec-butylbenzene	tert-butylbenzene	isopropylbenzene	4-isopropyltoluene	naphthalene	n-propylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	total lead	
				mg/kg			ug/kg															
MW-5	May-00	1.5	5	---	<1	8.0	<5	<5	<5	78	<5	57	<5	<5	20	<5	35	39	168	42	77	
																						3.2
MW-6	May-00	1.5	5	---	2.1	2.0	18	8	<5	10	<5	126	59	64	166	17	<5	280	20	15	27	
																						1.7
		3.0	10	---	54	<1	276	15	43	44	<5	12	<5	<5	12	<5	<5	20	103	27	8	

ND = not detected  
 --- = not analyzed  
 g/kg = milligrams per kilogram  
 ug/kg = micrograms per kilogram  
 < = not detected above laboratory reporting limit  
 1.7 = WET soluble lead reported in milligrams per liter (mg/L)

TABLE 4

PH, CONDUCTIVITY, OIL AND GREASE, GASOLINE, DIESEL FUEL,  
 BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES  
 CHEMICAL ANALYSES RESULTS OF GROUNDWATER SAMPLES  
 COLLECTED BY ASE AT THE THOMAS A. SHORT COMPANY, OAKLAND, CA  
 ON FEBRUARY 12, AND OCTOBER 12 & 14, 1993

Ground Water Well ID	pH EPA 9040	Conduc- tivity EPA 120.1 [uS]	Oil and Grease EPA 418.1 [mg/L]	Gasoline EPA 5030/8015 [ug/L]	Diesel Fuel EPA 3510/8015 [ug/L]	Benzene EPA 602 [ug/L]	Toluene EPA 602 [ug/L]	Ethyl- benzene EPA 602 [ug/L]	Xylenes EPA 602 [ug/L]
<u>2/12/93</u>									
W 1	6.7	14,000	NA	4,600	<50	15	16	22	64
W 2	6.7	1,300	8.1	NA	NA	<0.5	<0.5	<0.5	<0.5
<u>10/12/93 &amp; 10/14/93</u>									
W 1	6.6	6,200	NA	3,700	<50	4.2	6.8	7.2	26
W 2	7.0	6,600	<0.5	320	<50	<0.5	0.6	0.7	2.2
W 3	6.9	1,430	3.6	<50	<50	<0.5	<0.5	<0.5	<0.5
MCL	NL	NL	NL	NL	NL	1	NL	680	1,750

Note: "uS" is micromhos per centimeter

"mg/L" is milligrams of compound per liter of groundwater.

"ug/L" is micrograms of compound per liter of groundwater.

"NA" is not analyzed. - "<" is less than detection limit.

"NL" is not listed in *California Code of Regulations Title 22*.

"MCL" is maximum contaminant level for primary drinking water constituent.

**Table 4**  
**Historical Groundwater Analytical Results**  
**Petroleum Hydrocarbons**  
**Former Thomas A. Short Company**  
**Oakland, California**

Sample Designation Sampling Date	MW-4												Environmental Screening Levels
	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	
<u>Petroleum Hydrocarbons, mg/l</u>													
Total Petroleum Hydrocarbons	--	--	--	<5	<5	<5	<5	--	--	--	--	--	
TPH as Gasoline	<b>4.8</b>	<b>4.2</b>	<b>8.1</b>	<0.050	<b>11</b>	<b>2.9</b>	<b>2.1</b>	<b>3.8</b>	<0.050	<b>3.5</b>	0.37	<b>2.21</b>	0.500
TPH as Diesel	0.5	0.47	0.61	<0.050	<b>1.17</b>	<b>1.26</b>	<b>1.1</b>	<b>1.4</b>	<b>1.4</b>	<b>0.88</b>	0.33	<b>1.4</b>	0.640
<u>Selected Volatile Organic Compounds, ug/l</u>													
Benzene	<b>122</b>	<b>55</b>	<b>51</b>	<b>47</b>	<b>35</b>	<b>9.7</b>	<b>23</b>	<b>24</b>	<b>18</b>	<b>24</b>	<2.0	<b>9.5</b>	46
Toluene	39	18	23	18	13	<2.0	5.6	10	4	7.5	<2.0	3.5	130
Ethylbenzene	<b>126</b>	<b>65</b>	<b>160</b>	<b>130</b>	<b>140</b>	<2.0	<b>20</b>	<b>84</b>	<4.0	<b>36</b>	<2.0	<2.0	290
Total Xylenes	<b>24.7</b>	<b>26.3</b>	<b>44.5</b>	<b>32.5</b>	<b>28</b>	<4.0	<b>15.4</b>	<b>24.6</b>	<11.9	<b>10.9</b>	<4.0	<12	13
<u>Fuel Oxygenates, ug/l</u>													
MTBE	<0.5	1.2	<5.0	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	1800
Total Dissolved Solids, mg/l	--	--	--	--	2240	2280	2830	--	--	--	--	--	--

**Notes:**

1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount.
5. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
6. Bold results exceed RBSLs.

Table 4  
 Historical Groundwater Analytical Results  
 Petroleum Hydrocarbons  
 Former Thomas A. Short Company  
 Oakland, California

Sample Designation Sampling Date	MW-5												Environmental Screening Levels
	5/26/00	11/27/00	3/29/01	1/15/02	4/18/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	
<u>Petroleum Hydrocarbons, mg/l</u>													
Total Petroleum Hydrocarbons	--	--	--	<5	<5	<5	<5	--	--	--	--	--	
TPH as Gasoline	4.8	1.7	2.7	7.8	1.2	4.1	1.7	4.6	<0.050	2.1	1.6	3.6	0.500
TPH as Diesel	0.6	0.45	0.96	<0.050	0.942	2.45	1.5	3.7	2.3	1.7	1.2	4	0.640
<u>Selected Volatile Organic Compounds, ug/l</u>													
Benzene	98	39	35	63	53	99	52	150	150	94	4.6	67	46
Toulene	7	2	1.1	3.1	2.5	4.6	2	6.3	5.2	2.5	<2.0	<20	130
Ethylbenzene	35	3.8	3.5	18	18	43	6.9	84	42	3.6	<2.0	<20	290
Total Xylenes	44	6.1	3.2	<4.0	<4.0	5.8	<4.7	<4.3	<8.0	<4.0	<4.0	<40	13
<u>Fuel Oxygenates, ug/l</u>													
MTBE	7	1.5	<5.0	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	1800
Total Dissolved Solids, mg/l	--	--	--	--	1410	1440	1820	--	--	--	--	--	--

Notes:

1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount.
5. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
6. Bold results exceed RBSLs.

Table 4  
 Historical Groundwater Analytical Results  
 Petroleum Hydrocarbons  
 Former Thomas A. Short Company  
 Oakland, California

Sample Designation Sampling Date	5/26/00	11/27/00	3/29/01	1/15/02	MW-6		10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
<u>Petroleum Hydrocarbons, mg/l</u>													
Total Petroleum Hydrocarbons	--	--	--	<5	<5	<5	<5	--	--	--	--	--	
TPH as Gasoline	<b>4.4</b>	0.32	0.26	<b>3.5</b>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.078	0.19	0.500
TPH as Diesel	0.4	0.18	0.42	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	0.640
<u>Selected Volatile Organic Compounds, ug/l</u>													
Benzene	<b>191</b>	16	<b>52</b>	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	46
Toluene	14	0.51	0.62	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	130
Ethylbenzene	<b>110</b>	1.1	1.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	290
Total Xylenes	<b>121</b>	0.88	<0.50	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	13
<u>Fuel Oxygenates, ug/l</u>													
MTBE	7	1.8	<5.0	<2.0	<2.0	<2.0	<2.0	--	--	--	--	--	1800
Total Dissolved Solids, mg/l	--	--	--	--	2820	3080	4360	--	--	--	--	--	--

Notes:

1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount.
5. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
6. Bold results exceed RBSLs.



# LOG OF BORING TSC/B-1

Equipment Hollow Stem Auger

Elevation N.A. Date 6/25/92

## Laboratory Analysis

Blows/ft.  
OVA Readings  
Hnu Readings (ppm)

Depth (ft.)  
Sample pnts.

SILTY CLAY (CL) *light brown, damp; loose to medium dense, rock fragments*  
  
*color changes to black, damp to moist, very soft, organics*  
  
*wet*  
  
*color changes to gray, moist to wet, trace rock fragments*

Fill

Boring terminated @ 14.0 feet.  
Ground water was not encountered @ time of drilling.



**GeoResource Consultants, Inc.**  
Geologists / Engineers / Environmental Scientists

**LOG OF BORING TSC/B-1**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE  
**B-7**

Job No. 1689-019-00 Appr: ADT Date 7/6/92

**LOG OF BORING TSC/B-2**

Equipment Hollow Stem Auger

Elevation N.A. Date 6/25/92

Laboratory Analysis

Blows/ft.	OVA Readings	Hnu Readings (ppm)
37		0
6		180
2		80
10		60
10		200



SILTY SAND (SM)  
light brown, wet, loose to medium dense,  
some rock fragments

color changes to black, moist, very loose

SILTY CLAY (CL)  
black, wet, soft

GRAVEL (GM)  
black, wet, some silt

Ground water was not encountered  
@ time of drilling.

Fill



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Job No. 1689-019-00 Appr: ADT Date 7/6/92

**LOG OF BORING TSC/B-2**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE  
**B-8**

**LOG OF BORING TSC/H-1**

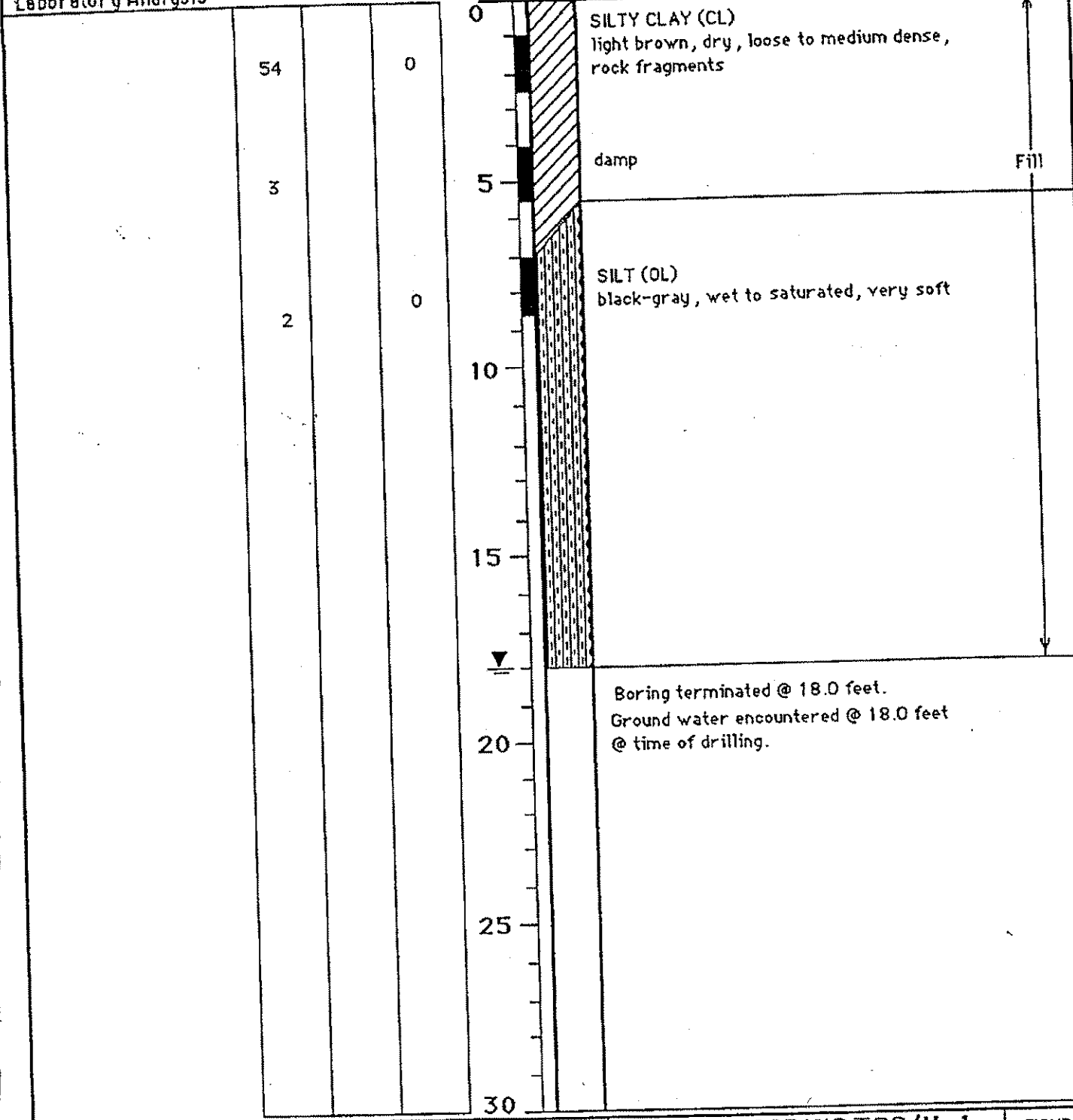
Equipment Hollow Stem Auger

Elevation N.A. Date 6/25/92

Laboratory Analysis

Blows/ft.  
OVA  
Readings  
Hnu  
Readings  
(ppm)

Depth (ft.)  
Sample pnts.



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Job No. 1689-019-00 Appr: AOT Date 7/6/92

**LOG OF BORING TSC/H-1**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE

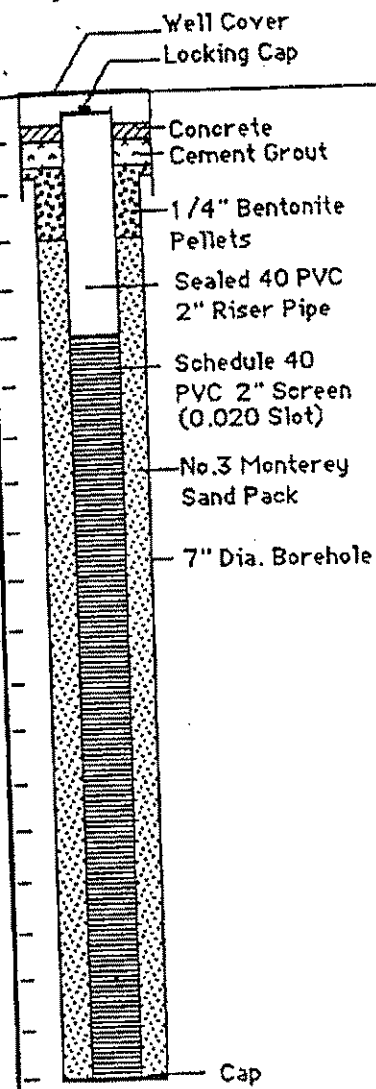
B-9

**LOG OF BORING TSC/W-1**

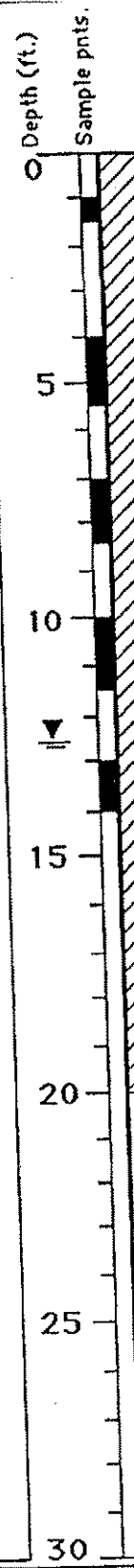
Equipment Hollow Stem Auger

Elevation N.A. Date 6/23/92

Well Installation Diagram



Blows/ft.	Hru Readings (ppm)
32	2
3	2
3	6
8	4
30	7



SILTY CLAY (CL)  
light brown, slightly moist, medium dense, rock fragments, debris (concrete)

color changes to dark brown, very soft

color changes to black, wet, very soft

color changes to light brown, some rock fragments, very stiff

Fill

Boring terminated @ 20.0 feet.  
Ground water encountered @ 12.7 feet



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Job No. 1689-019-00 Appr: AOT Date 7/6/92

**LOG OF BORING TSC/W-1**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE  
**B-10**

# LOG OF BORING TSA-1

Equipment Hand Auger

Elevation N.A. Date 6/23/92

Laboratory Analysis

Blows/ft.

OVA

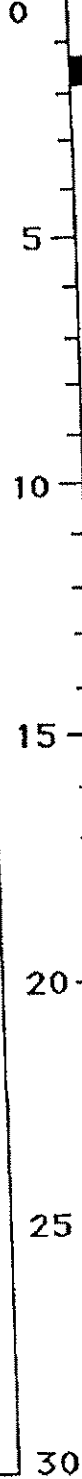
Readings

Hnu

Readings  
(ppm)

Depth (ft.)

Sample pnts.



8" CONCRETE PAD

GRAVELLY SANDY CLAY (CL)  
black to dark gray, moist to wet,  
soft to firm, gravel to 6" dia.

Boring terminated @ 1.8 feet.  
Ground water was not encountered  
@ time of drilling.



**Geo/Resource Consultants, Inc.**  
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Job No. 1689-019-00 Appr: ADT Date 7/7/92

**LOG OF BORING TSA-1**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE  
**B-11**

# LOG OF BORING TSA-2

Equipment Hand Auger

Elevation N.A. Date 6/23/92

Laboratory Analysis

Blows/ft.

OVA

Readings

Hnu

Readings  
(ppm)

Depth (ft.)

Sample pnts.

0

5

10

15

20

25

30

10" CONCRETE PAD

GRAVELLY SANDY CLAY (CL)  
dark brown to black, moist to wet,  
soft, gravel to 3" dia.

Boring terminated @ 3.5 feet.  
Ground water was not encountered  
@ time of drilling.



**GeoResource Consultants, Inc.**  
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Job No. 1689-019-00 Appr: ADT Date 7/7/92

**LOG OF BORING TSA-2**  
SITE INVESTIGATION REPORT  
DEPARTMENT OF TRANSPORTATION  
INTERSTATE 880  
CYPRESS RECONSTRUCTION  
OAKLAND, CALIFORNIA

FIGURE

B-12

PROJECT NO. S8225-06-103

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. MW-4		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED 5/23/00	WATER LEVEL (ATD) 10.5'		
				EQUIPMENT MOBILE B-61		DRILLER V&W DRILLING	
SOIL DESCRIPTION							
1				FILL Sandy GRAVEL (GP)			1.1
2							
3							
4				FILL Sandy SILT with GRAVEL (ML)			0.2
5				FILL Saturated GRAVEL			
6	2	MW4-5		Very soft, very moist, dark grayish black (10YR 2/1), fine SAND (SM) - highly organic, plastic			
7							
8							
9				Very soft, very moist, dark gray (10YR 3/1), Clayey SILT (OL) - organic, plastic			
10							
11	4	MW4-10		- becomes saturated at approximately 10.5 feet			
12							
13							
14				Very stiff, dark yellowish brown, fine to medium, Sandy CLAY with 1/4 inch gravel (CL) - plastic			
15	20						
16							
17				BORING TERMINATED AT 15 FEET SPLIT SPOON SAMPLER WAS PUSHED TO 16.5 FEET WELL CASING SET AT 15 FEET			
18							
19							

Figure A1, Log of Boring MW-4, page 1 of 1

ENV\_WELL\_WELLS.GPJ 06/14/00

CASING ELEVATION: NA	QUANTITY OF FILTER MATERIAL: 3.5 - 90LB BAGS
DIAMETER & TYPE OF CASING: 2"	WELL SEAL & INTERVAL: BENTONITE CHIPS 1.5 - 3'
CASING INTERVAL: 0 - 5'	WELL SEAL QUANTITY: 1 40LB BAG
WELL SCREEN: 0.01"	ANNULUS SEAL/INTERVAL: READY-MIX CONCRETE 0 - 1.5'
SCREEN INTERVAL: 5 - 15'	ADDITIVES: WATER
WELL COVER: STAND PIPE MONUMENT	WELL DEPTH: 15
FILTERPACK/INTERVAL: SILICA SAND 10X20	ENGINEER/GEOLOGIST: MATT HANKO

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. S8225-06-103

DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>MW-5</u>		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED <u>5/23/00</u>	WATER LEVEL (ATD) <u>13.0'</u>		
				EQUIPMENT <u>MOBILE B-61</u>	DRILLER <u>V&amp;W DRILLING</u>		
SOIL DESCRIPTION							
1				<b>FILL</b> Sandy GRAVEL (GP)			
2				<b>FILL</b> Very stiff, slightly moist, dark yellowish brown (10YR 4/2), Silty CLAY with sand (CL) - plastic			
3							
4							
5				<b>FILL</b> Saturated Sandy GRAVEL (GP)			
6		MW5-5					
7				Very soft, very moist, dark gray (10YR 3/1) Clayey SILT (OL) - slightly plastic, organic			poor recovery
8							
9							
10	13	NOREC					
11							
12							
13				Stiff, saturated, yellowish brown (10YR 4/2), 1/4 inch GRAVEL with clay (GP) - poorly graded			
14							
15	10			Soft, slightly moist, pale brown (10YR 5/3), Sandy SILT (ML) - slightly plastic			0
16							
17				BORING TERMINATED AT 15 FEET SPLIT SPOON SAMPLER WAS PUSHED TO 16.5 FEET WELL CASING SET AT 15 FEET			
18							
19							

Figure A2, Log of Boring MW-5, page 1 of 1

ENV\_WELL\_WELLS.GPJ 06/14/00

CASING ELEVATION: <b>NA</b>	QUANTITY OF FILTER MATERIAL: <b>3.5 - 90LB BAGS</b>
DIAMETER & TYPE OF CASING: <b>2"</b>	WELL SEAL & INTERVAL: <b>BENTONITE CHIPS 1.5 - 3'</b>
CASING INTERVAL: <b>3 - 5'</b>	WELL SEAL QUANTITY: <b>1 40LB BAG</b>
WELL SCREEN: <b>0.01"</b>	ANNULUS SEAL/INTERVAL: <b>READY-MIX CONCRETE 0 - 1.5'</b>
SCREEN INTERVAL: <b>5 - 15'</b>	ADDITIVES: <b>NONE</b>
WELL COVER: <b>STAND PIPE MONUMENT</b>	WELL DEPTH: <b>15</b>
FILTERPACK/INTERVAL: <b>SILICA SAND 10X20</b>	ENGINEER/GEOLOGIST: <b>MATT HANKO</b>

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.



PROJECT NO. S8225-06-103




















DEPTH IN FEET	PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. MW-6		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED 5/23/00	WATER LEVEL (ATD) 15.5'		
				EQUIPMENT MOBILE B-61		DRILLER V&W DRILLING	
SOIL DESCRIPTION							
1				FILL Sandy GRAVEL with concrete debris (GP)			
2				FILL Stiff, slightly moist, dark grayish brown (10YR 4/1), Sandy CLAY with 5% gravel up to 1 inch in diameter (CL) - plastic			
3							
4				FILL Saturated GRAVEL Very soft, very moist, dark grayish black (10YR 3/1), Sandy SILT (OL) - organic, plastic			0.1
5		6					
6							
7							
8							
9				Stiff, slightly moist, gray (10YR 4/1), Sandy CLAY with 1/4 to 2 inch gravel - slight petroleum odor (CL)			
10		11					12.4
11							
12							
13							
14							
15		11					
16				Saturated, dark yellow brown (10YR 4/2), coarse SAND (SP) Soft, slightly moist, pale brown (10YR 5/3), Sandy SILT (ML) - slightly plastic			0
17							
18							
19							
				BORING TERMINATED AT 15 FEET SPLIT SPOON SAMPLER WAS PUSHED TO 16.5 FEET WELL CASING SET AT 15 FEET			

Figure A3, Log of Boring MW-6, page 1 of 1

ENV\_WELL\_WELLS.GPJ 06/14/00

CASING ELEVATION: NA	QUANTITY OF FILTER MATERIAL: 3.5 - 90LB BAGS
DIAMETER & TYPE OF CASING: 2"	WELL SEAL & INTERVAL: BENTONITE CHIPS 1.5 - 3'
CASING INTERVAL: 3 - 5'	WELL SEAL QUANTITY: 1 40LB BAG
WELL SCREEN: 0.01"	ANNULUS SEAL/INTERVAL: READY-MIX CONCRETE 0 - 1.5'
SCREEN INTERVAL: 5 - 15'	ADDITIVES: NONE
WELL COVER: STAND PIPE MONUMENT	WELL DEPTH: 15
FILTERPACK/INTERVAL: SILICA SAND 10X20	ENGINEER/GEOLOGIST: MATT HANKO

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.