

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

April 10, 2009

Randy Baker
State of California
Department of Transportation
111 Grand Avenue
Oakland, CA 94623

REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Fuel Leak Case No. RO0002423 and GeoTracker Global ID T0600102201, Caltrans East Bay
Paint Yard, 0 Burma Road, Oakland, CA 94649

Dear Mr. Baker:

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,

Ariu Levi
Director
Alameda County Environmental Health

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

April 16, 2009

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
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Randy Baker
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Department of Transportation
111 Grand Avenue
Oakland, CA 94623

Subject: Fuel Leak Case No. RO0002423 and GeoTracker Global ID T0600102201, Caltrans East Bay
Paint Yard, 0 Burma Road, Oakland, CA 94649

Dear Mr. Baker:

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 gasoline, TPH as diesel, and TPH as motor at concentrations of up to 6.0 mg/kg, 9.7 mg/kg, and 250 mg/kg, respectively.
- Maximum concentrations of up to 51 µg/L MTBE and 1,200 µg/L Lead remain in groundwater beneath the site.

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

Sincerely,

Donna L. Drogos, P.E.
LOP and Toxics Program Manager

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: February 3, 2009

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: Caltrans East Bay Paint Yard		
Site Facility Address: 0 Burma Road, Oakland, California		
RB Case No.: 01-2391	Local Case No.: 4464	LOP Case No.: RO0002423
URF Filing Date: 11/23/1993	Global ID No.: T0600102201	APN: O-335-4
Responsible Parties	Addresses	Phone Numbers
Randy Barker State of California Department of Transportation	111 Grand Avenue Oakland CA, 94623	(510) 286-6121

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1 x 2,000-gallon	Gasoline	Removed	01/27/1998
2	1 x 4,000-gallon	Diesel	Removed	01/27/1998
Piping			Removed	01/27/1998

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown		
Site characterization complete? Yes	Date Approved By Oversight Agency: --	
Monitoring wells installed? No	Number: 0	Proper screened interval? NA
Highest GW Depth Below Ground Surface: 14.5 inches bgs (tank removal, 1/27/98)	Lowest Depth: 14.5 inches bgs (tank removal, 1/27/98)	Flow Direction: Assumed West to Northwesterly
Most Sensitive Current Use: Potential Drinking Water Resource.		

Summary of Production Wells in Vicinity: A well survey was not conducted at this site. Non-detect concentrations of contaminants have been reported in site groundwater monitoring wells. Considering the non-migratory residual concentrations of dissolved phase petroleum hydrocarbons in the groundwater that is confined to the primary source areas at the Site, no water wells, deeper drinking water aquifers, surface water or other sensitive receptors are likely to be impacted.

Are drinking water wells affected? No	Aquifer Name: East Bay Plain Groundwater Basin
Is surface water affected? No	Nearest SW Name: San Francisco Bay is approximately 450 feet south of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health & City of Oakland Fire Prevention Bureau

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	One 2,000-gallon One 4,000-gallon	Disposal to Erickson, Inc. 255 Parr Blvd., Richmond, CA 94801 / Unknown Location	1/27/1998
Piping	Unknown	Disposal to Erickson, Inc./ unknown location	1/27/1998
Free Product	None Reported	---	---
Soil	108 cubic yards	Disposed to Laidlaw Environmental's Class I Landfill in Buttonwillow, CA	02/1998
Groundwater	43,750-gallons	Disposed to Seaport Environmental 475 Seaport Blvd., Redwood City, CA 94604	01/1998

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)	6.0 (Soil comp, 1/29/1998)	6.0 (Soil comp, 1/29/1998)	33,000 (Water M, 1/29/98)	<500 (2/2/1999)
TPH (Diesel)	9.7 (Soil comp, 1/29/1998)	9.7 (Soil comp, 1/29/1998)	3,800 (Water 1, 1/29/98)	<400 (2/2/1999)
TPH (Motor Oil)	250 (Soil W, 1/29/1998)	250 (Soil W, 1/29/1998)	<50 (Water 1, 1/29/98)	NA
TOG	NA	NA	NA	NA
Benzene	<0.025 (Soil comp, 1/29/1998)	<0.025 (Soil comp, 1/29/1998)	55 (Water 2, 1/29/98)	<0.6 (2/2/1999)
Toluene	0.035 (Soil comp, 1/29/1998)	0.035 (Soil comp, 1/29/1998)	1,200 (Water 2, 1/29/98)	<1.0 (2/2/1999)
Ethylbenzene	0.031 (Soil comp, 1/29/1998)	0.031 (Soil comp, 1/29/1998)	210 (Water 2, 1/29/98)	<1.0 (2/2/1999)
Xylenes	0.025 (Soil comp, 1/29/1998)	0.025 (Soil comp, 1/29/1998)	1,300 (Water 2, 1/29/98)	<3.0 (2/2/1999)
MTBE	<0.025 ⁵ (Soil comp, 1/29/1998)	<0.025 ⁴ (Soil comp, 1/29/1998)	1,100 ³ (Water 2, 1/29/98)	51 ² (EB-1, 2/2/1999)
Lead	26 ¹ (Soil W, 1/29/1998)	1.2 ¹ (EB-1, 2/2/1999)	1,200 (EB-1, 2/2/1999)	1,200 (EB-1, 2/2/1999)
Naphthalene	NA	NA	NA	NA

NA Not Analyzed

¹ All other Pb concentrations on-site ranged from 2.5 to 26 mg/kg.

² Other VOCs (groundwater µg/L after cleanup): NA µg/L MtBE, NA µg/L TBA, NA µg/L DIPE, NA µg/L ETBE, NA µg/L TAME, <0.9 µg/L EDB, <1.0 µg/L 1,2-DCA, NA µg/L EtOH

³ Other VOCs (groundwater ppb before cleanup): NA µg/L MtBE, NA µg/L TBA, NA µg/L TAME, <NA µg/L ETBE, NA µg/L DIPE

⁴ Other VOCs (Soil mg/kg after cleanup): NA mg/kg TBA, NA mg/kg DIPE, NA mg/kg ETBE, NA mg/kg TAME, NA mg/kg EtOH, NA mg/kg EDB, NA mg/kg EDC

⁵ Other VOCs (Soil mg/kg before cleanup): <0.025 mg/kg MtBE, NA mg/kg TBA, NA mg/kg TAME, NA mg/kg DIPE, NA mg/kg EtOH, NA mg/kg EDB, NA mg/kg EDC

Site History and Description of Corrective Actions:

Caltrans owned and operated two underground storage tanks consisting of one 2,000-gallon gasoline UST and one 4,000-gallon diesel UST at the East Bay Paint Yard, San Francisco Oakland Bay Bridge at Burma Road in Oakland, California.

On January 27, 1998, the two USTs, dispenser island, and overburden soil were excavated and disposed of off-site. All tank rinsate and associated fluids were disposed of a Ramos Environmental Services located at 1515 South River Road in West Sacramento, California. The USTs were transported to the Erickson Facility at 255 Parr Boulevard in Richmond, California. It is reported that upon removal, the gasoline UST broke apart and had to be placed into a roll-off bin for transportation.

Water infiltrated the excavation as shallow as 14 inches below the ground surface (bgs) and had to be pumped out to facilitate UST removals. The water was stored temporarily on-site in portable tanks and shipped as non-hazardous waste to Seaport Environmental located in Redwood City, California. A total of 43,750 gallons of water was pumped, stored, and later shipped to Seaport Environmental for disposal. Approximately 108 cubic yards of stockpiled soil was transported to Laidlaw Environmental's Class I Landfill located in Buttonwillow, California.

Following the removal of the USTs, soil and groundwater samples were collected as directed by the Oakland Fire Inspector. Soil samples were collected adjacent to the former USTs and stockpiled soil as well as of the groundwater that accumulated in the excavation. Reporting from Bradley, the UST removal contractor was very poor, so the precise locations of the soil samples are unknown. Soil sample analytical results detected a maximum TPH-mo concentration of 250 mg/kg. Benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE were not detected above the laboratory

detection limit. Groundwater sample analytical results detected TPH-d, TPH-g, benzene, and MTBE at concentrations of 3,800 µg/L, 33,000 µg/L, 55 µg/L, and 1,100 µg/L, respectively. Sampling locations are illustrated on Figure 1 and analytical results are summarized on Table 1.

Due to the elevated groundwater sample analytical results, Caltrans retained A. E. Schmidt Environmental (AESE) to complete the UST removal report and to perform a subsurface investigation at the location of the former USTs. On February 2, 1999, AESE installed six direct push borings (EB-1 through EB-6) in the vicinity of the former USTs. The depths of the borings were not reported. No soil samples were collected. Groundwater was encountered at approximately one foot below grade. Groundwater samples were collected from all six locations. TPH-d, TPH-g, and benzene were not detected above the laboratory detection limit of <500 µg/L, <400 µg/L, <0.6 µg/L, respectively. MTBE was detected at a maximum concentration of 51 µg/L in a groundwater sample collected from boring EB-1. Sampling locations are illustrated on Figure 2 and analytical results are summarized on Table 2.

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.		
Site Management Requirements: City of Oakland Building Department has been notified that should excavation or development of the property be proposed that may encounter impacted soil or groundwater, Alameda County Environmental Health must be notified as required by Government Code Section 65850.2.2. The current property owner/developer must submit a soil and groundwater management plan for review prior to any construction activities. Please note that case closure for the fuel leak site is granted for industrial land use only. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case needs to be re-evaluated.		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: NA	Number Decommissioned: 0	Number Retained: 0
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

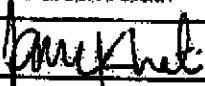

V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances:</p> <ul style="list-style-type: none"> • Soil samples were only collected at UST removal and all samples were composited rather than discrete samples. • Currently, residual soil contamination of TPH-mo at concentrations of 250 mg/kg was left in place in the UST pit. • Soil samples were collected at one end of each UST only. <p>Conclusion:</p> <p>The concentrations of petroleum hydrocarbons have decreased substantially since the UST removals indicating that a significant release of gasoline or diesel fuel has not occurred at the site. The lower concentrations are likely attributed to natural attenuation processes occurring at the site.</p> <p>The residual contamination does not appear to pose a significant risk to the current industrial use of the site or to groundwater resources in the area. Additionally, groundwater sample analytical results, did not detect TPH-g, TPH-d, or benzene above the laboratory detection limits of <500 µg/L, <400 µg/L, <0.6 µg/L, respectively. Please note that the detection limits for TPH-d and TPH-g exceed the aquatic protection Environmental Screening Level of 210 µg/L for both</p>
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gasoline and diesel. However, the concentration of TPH-d and TPH-g appear to be localized to the former UST vicinity and is unlikely to further migrate to San Francisco Bay without significant dilution, dispersion, and attenuation. Although MTBE was detected in the groundwater at a concentration of 51 µg/L, it is below the aquatic protection Groundwater Screening Levels of 8,000 µg/L for MTBE. The concentrations of hydrocarbons are expected to decrease over time as a result of biodegradation and natural attenuation processes. EDB and EDC were not analyzed in soil or groundwater.


Alameda County Environmental Health staff consider that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup is necessary. ACEH staff recommend case closure for this site based on the current industrial use of the site. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case needs to be re-evaluated.

VI. LOCAL AGENCY REPRESENTATIVE DATA

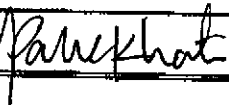
Prepared by: Parash Khatri	Title: Hazardous Materials Specialist
Signature: 	Date: February 3, 2009
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 03/10/09

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
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB:
Signature: 	Date: 4/3/09

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: NA	Date of Well Decommissioning Report: NA	
All Monitoring Wells Decommissioned: NA	Number Decommissioned: 0	Number Retained: 0
Reason Wells Retained: No monitoring wells installed or retained.		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: 		Date: 4/10/2009

Attachments:

1. Site Vicinity Maps (2 pp).
2. Sampling Location Maps (3 pp).
3. Tables 1 & 2.
4. Borings logs (EB-1 through EB-3 from Geotechnical Investigation performed at the site by Lowmyer Associates).

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.

ASSESSOR'S MAP O

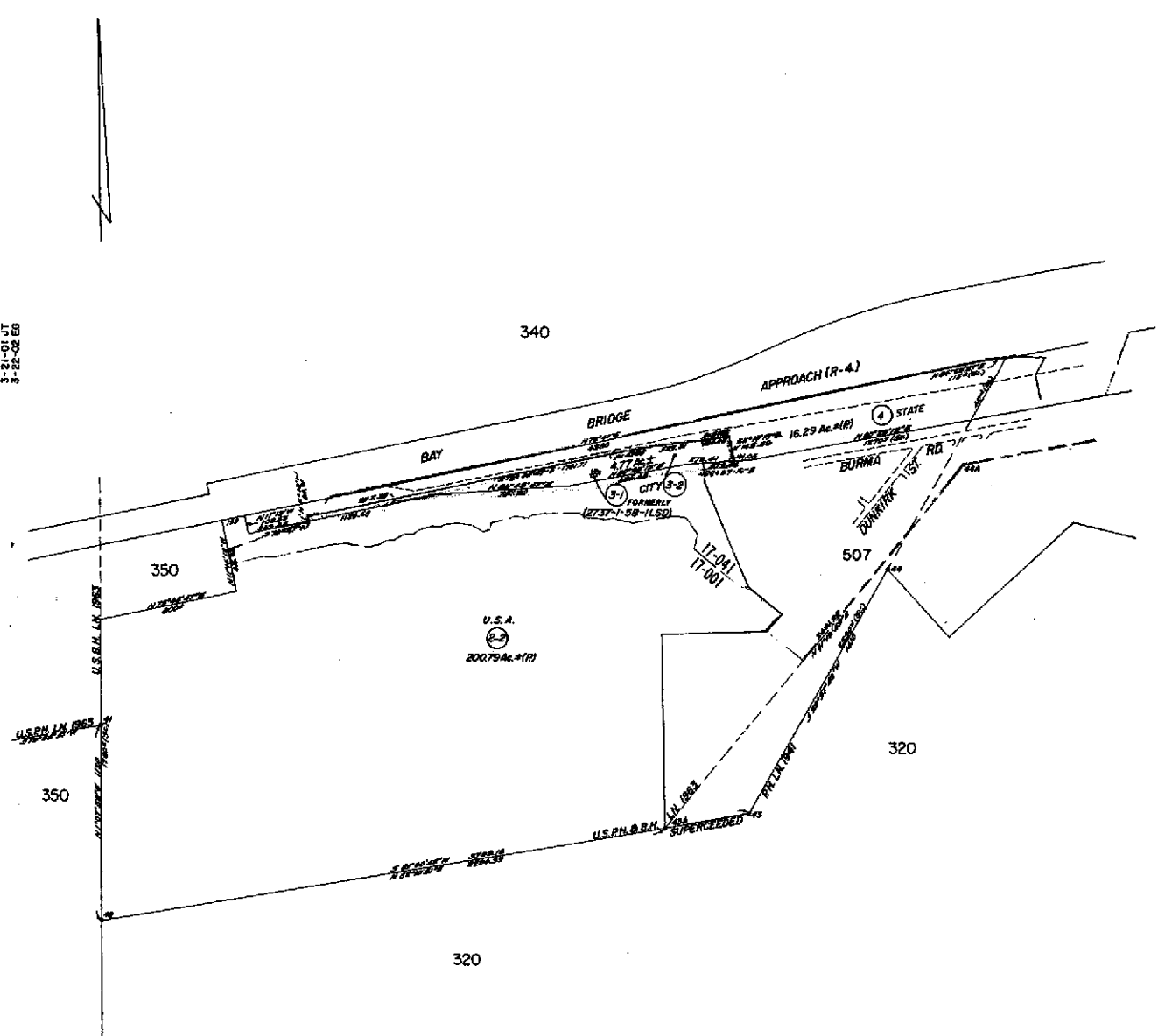
Code Area Nos. 17-001
17-041

335

Scale: 1" = 500'

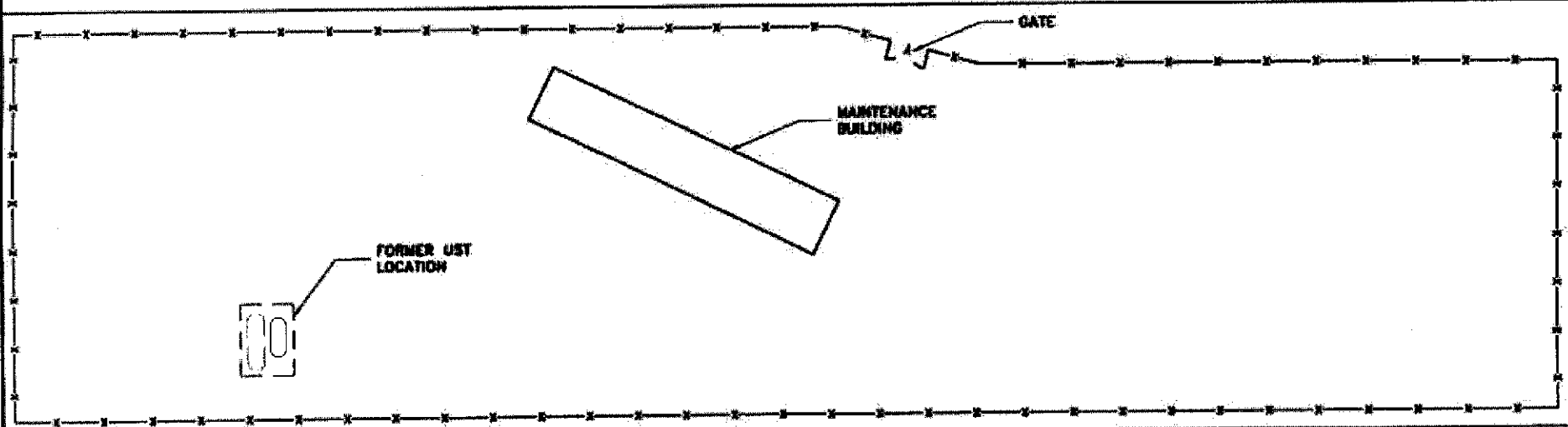
OAKLAND ARMY TERMINAL (UNRECORDED) (Case 7-1-1)

Drawn: 2-66 R.H.S. Revised: 5-7-79 R.H.
5-10-88 L.G.R. 5-18-07 L.L.
3-21-01 J.T. 3-22-02 E.B.



Formerly: Blks. 55, 56 & pin. Blks. 46 & 54

INTERSTATE 80 TO OAKLAND



BURMA ROAD



GRAPHIC SCALE IN FEET



SCALE 1" = 80'

Drawn By:	A VILLANUEVA
Approved By:	D INDERMILL
Date:	5/22/99
Job No.:	1193
File:	EAST BAY

**EAST BAY
MAINTENANCE YARD
BURMA ROAD
OAKLAND, CALIFORNIA**



SAMPLE PLAN VIEW

**FIGURE
1**

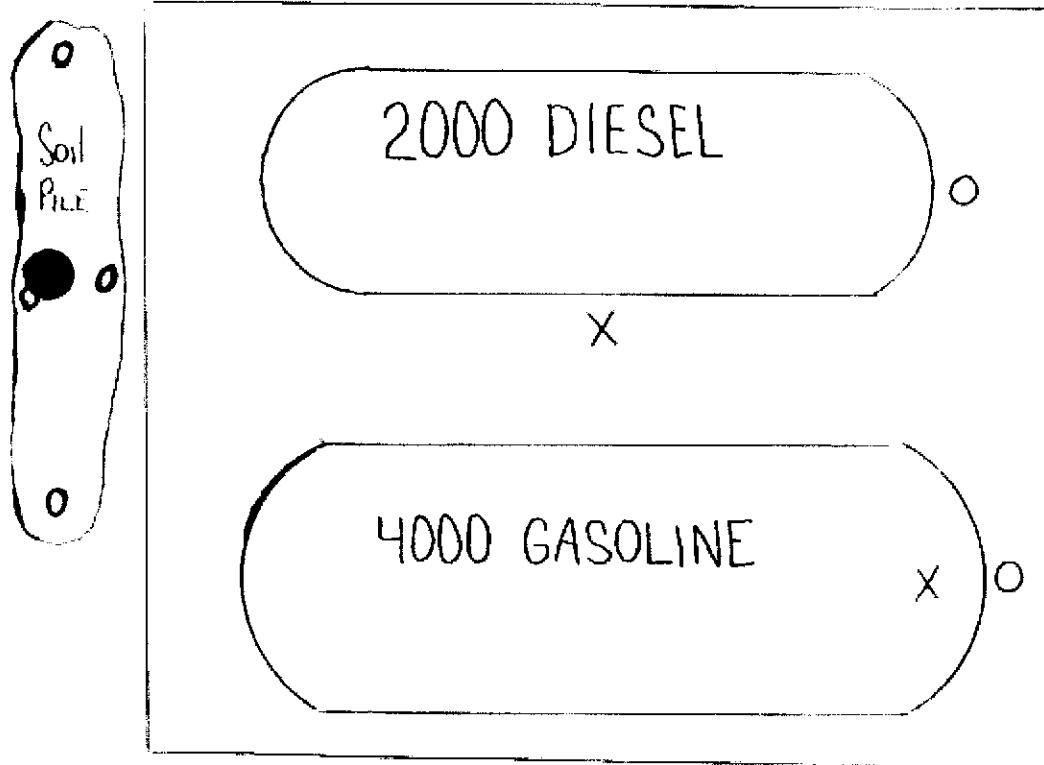
SECTION 3.0

FIGURE 1

SITE MAP

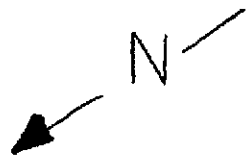


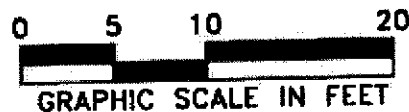
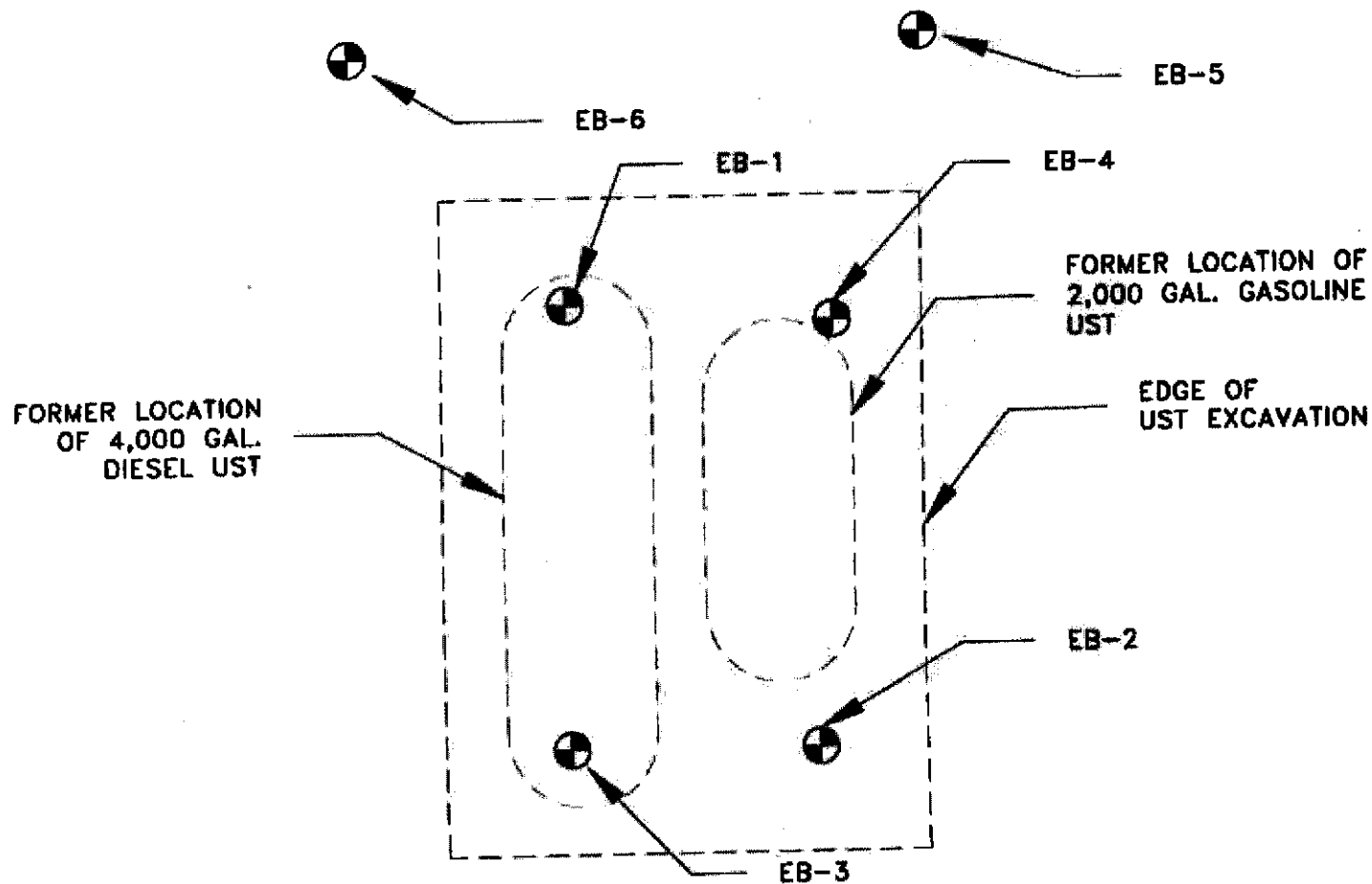
EAST BAY PAINT
CAL TRANS



X = WATER
SAMPLE

O = SOIL
SAMPLE





SCALE 1" = 10'

Drawn By:	A VILLANUEVA
Approved By:	D INDERMILL
Date:	5/23/99
Job No.:	1193
File:	EAST BAY

**EAST BAY
MAINTENANCE YARD
BURMA ROAD
OAKLAND, CALIFORNIA**

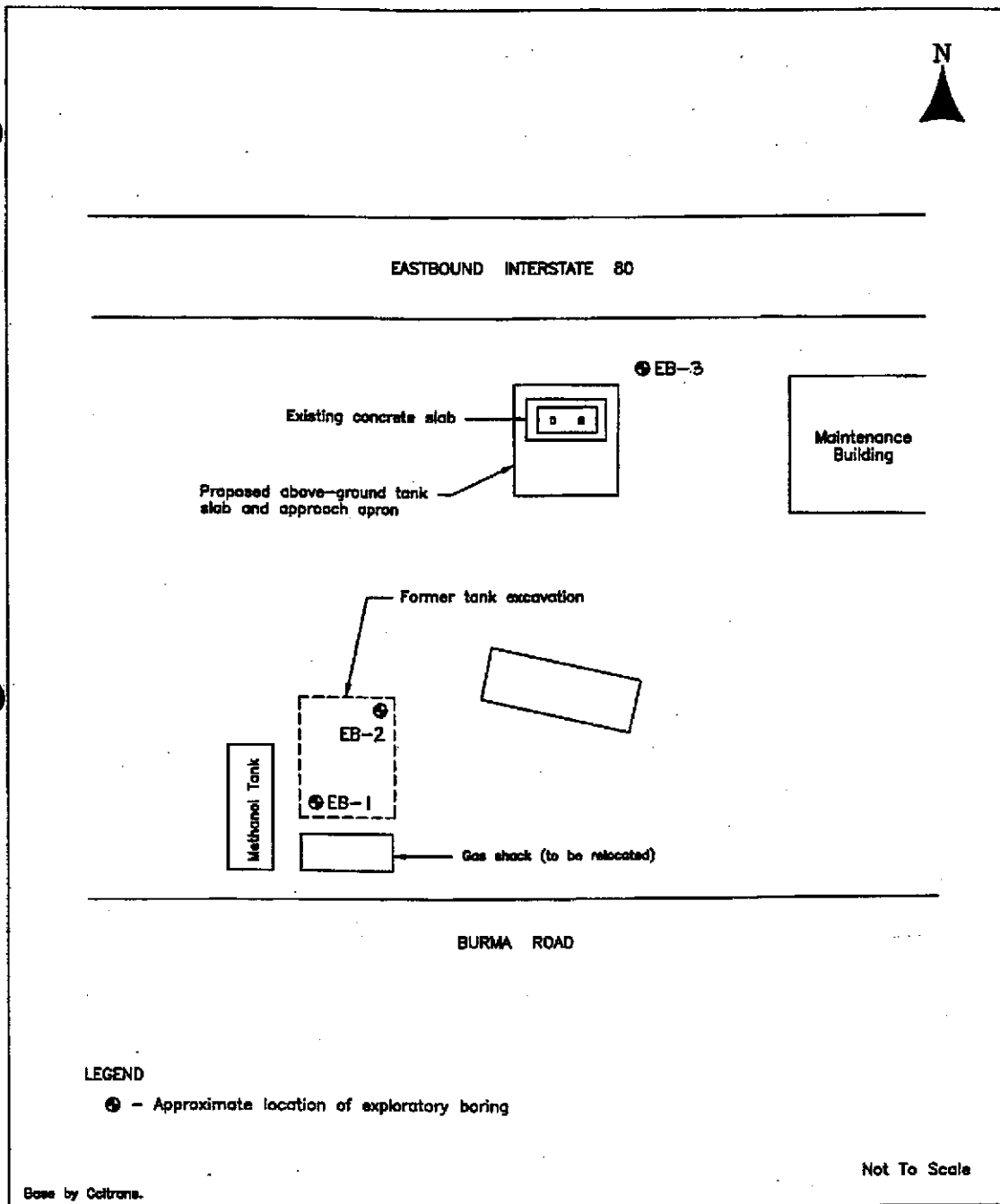


AESE
A.E. SACRAMENTO ENVIRONMENTAL, INC.
ENGINEERS, PLANNERS AND CONTRACTORS

SAMPLE LOCATIONS

FIGURE

2



SITE PLAN
CALTRANS FACILITY-OAKLAND
 Oakland, California

LOWNEY ASSOCIATES
 Environmental/Geotechnical/Engineering Services

FIGURE 2
 1480-2

Table 1: Soil and Groundwater Analytical Results from UST Removals

Sample ID	Date Collected	TPH-g	TPH-d	TPH-mo	TPH-k	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Soil (mg/kg)										
Soil W	1/29/98	<1.0	<1.0	250	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
Soil (composite)	1/29/98	6.0	9.7	110	<1.0	<0.025	0.035	0.031	0.25	<0.025
Water (µg/L)										
Water 1	1/29/98	--	3,800	<50	<50	--	--	--	--	--
Water 2	1/29/98	14,000	--	--	--	55	1,200	210	1,300	1,100
Water M	1/29/98	33,000	--	--	--	<50	190	100	500	410

-- Not analyzed
 mg/kg milligrams per kilogram
 µg/L micrograms per liter
 MTBE methyl tertiary butyl ether

TPH-d total petroleum hydrocarbons as diesel
 TPH-g total petroleum hydrocarbons as gasoline
 TPH-k total petroleum hydrocarbons as kerosene
 TPH-mo total petroleum hydrocarbons as motor oil

Table 2: Groundwater Analytical Results from Exploratory Borings

Sample ID	Date Collected	TPH-g	TPH-d	TPH-mo	TPH-k	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Water (µg/L)										
EB-1	2/2/99	<500	<400	--	--	<0.6	<1.0	<1.0	<3.0	47/51
EB-2	2/2/99	<500	<400	--	--	<0.6	<1.0	<1.0	<3.0	<1.0
EB-3	2/2/99	<500	<400	--	--	<0.6	<1.0	<1.0	<3.0	<1.0
EB-4	2/2/99	<500	<400	--	--	<0.6	<1.0	<1.0	<3.0	11/11
EB-5	2/2/99	<500	<400	--	--	<0.6	<1.0	<1.0	<3.0	11/9.1
EB-6	2/2/99	<500	<400	--	--	<0.6	<1.0	<1.0	<3.0	21/16

-- Not analyzed
 xx/xx EPA Method 8015 Mod/EPA Method 8260
 µg/L micrograms per liter
 MTBE methyl tertiary butyl ether

TPH-d total petroleum hydrocarbons as diesel
 TPH-g total petroleum hydrocarbons as gasoline
 TPH-k total petroleum hydrocarbons as kerosene
 TPH-mo total petroleum hydrocarbons as motor oil

EXPLORATORY BORING: EB-1

Sheet 1 of 1

DRILL RIG: MOBILE B-40

PROJECT NO: 1460-2

BORING TYPE: 8" HOLLOW STEM

PROJECT: CALTRANS FACILITY

LOGGED BY: DGB

LOCATION: OAKLAND

START DATE: 4-27-99

FINISH DATE: 4-27-99

COMPLETION DEPTH: 16.5 FT.

This log is a part of a report by Lowney Associates, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (FT)	DEPTH (FT)	SOIL LEGEND	MATERIAL DESCRIPTION AND REMARKS	SOIL TYPE	PENETRATION RESISTANCE (BLOWS/FT)	SAMPLER	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT PASSING NO. 200 SIEVE	Undrained Shear Strength (ksf)								
										○ Pocket Penetrometer	△ Torvane	● Unconfined Compression	▲ U-U Triaxial Compression	1.0	2.0	3.0	4.0	
	0		SURFACE ELEVATION:															
	0 - 2.5		CLAYEY GRAVEL (GC) [FILL] medium dense, moist, dark brown, fine to coarse gravel, fine to coarse sand, clay	GC	22	X	10											
	2.5 - 5.0		SANDY GRAVEL (GP) [FILL] medium dense, wet, brown, fine to coarse sand, fine to medium gravel, trace clay	GP	10	X	13		8									
	5.0 - 9.5		loose	GP	4	○			17									
	9.5 - 10.0		loose clay layer at 9.5 feet	GP	7	X	25											
	10.0 - 15.0		SAND (SP) medium dense, wet, gray, fine sand, trace shells	SP	21	X	22											
	15.0 - 16.5		1 inch clay lense	SP	17	X	30											
	16.5		Bottom of Boring @ 16.5 feet.															

GROUND WATER OBSERVATIONS:

∇ : FREE GROUND WATER MEASURED FOLLOWING DRILLING AT 2.5 FEET

LA CORP. GDT. 6/12/99 MOUNTAIN VIEW DB08

EXPLORATORY BORING: EB-2

Sheet 1 of 1

DRILL RIG: MOBILE B-40

PROJECT NO: 1460-2

BORING TYPE: 8" HOLLOW STEM

PROJECT: CALTRANS FACILITY

LOGGED BY: DGB

LOCATION: OAKLAND

START DATE: 4-27-99

FINISH DATE: 4-27-99

COMPLETION DEPTH: 20.0 FT.

This log is a part of a report by Lowney Associates, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (FT)	DEPTH (FT)	SOIL LEGEND	MATERIAL DESCRIPTION AND REMARKS	SOIL TYPE	PENETRATION RESISTANCE (BLOWS/FT.)	SAMPLER	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT PASSING NO. 200 SIEVE	Undrained Shear Strength (ksf)								
			SURFACE ELEVATION:							○ Pocket Penetrometer	△ Torvane	● Unconfined Compression	▲ U-U Triaxial Compression	1.0	2.0	3.0	4.0	
	0		CLAYEY GRAVEL (GC) [FILL]	GC														
	0		SANDY GRAVEL (GP) [FILL] medium dense, wet, dark brown, fine to coarse sand, fine to medium gravel	GP	30	X	12											
	5		loose	GP	19	X	7											
	5			GP	7	X	22		4									
	10		SAND lens ORGANIC SILTY CLAY (OH) soft, wet, bluish gray, high plasticity	SP	0	X	68											
	10			OH														
	15		intrebedded sand lenses with shells from 13.5 to 15 feet		1	X	40											
	15		CLAYEY SAND (SP-SC) loose, wet, gray, fine sand, shells	SP-SC	8	X	25		11									
	15			SP-SC	24	X	20											
	20		medium dense															
	20		Bottom of Boring @ 20 feet.															

GROUND WATER OBSERVATIONS:

∇: FREE GROUND WATER MEASURED FOLLOWING DRILLING AT 2.5 FEET

LA CORP GDT 5/12/99 MOUNTAIN VIEW DGB

EXPLORATORY BORING: EB-3

Sheet 1 of 1

DRILL RIG: MOBILE B-40

PROJECT NO: 1460-2

BORING TYPE: 8" HOLLOW STEM

PROJECT: CALTRANS FACILITY

LOGGED BY: DGB

LOCATION: OAKLAND

START DATE: 4-27-99

FINISH DATE: 4-27-99

COMPLETION DEPTH: 25.0 FT.

This log is a part of a report by Lowney Associates, and should not be used as a stand-alone document. This description applies only to the location of the exploration at the time of drilling. Subsurface conditions may differ at other locations and may change at this location with time. The description presented is a simplification of actual conditions encountered. Transitions between soil types may be gradual.

ELEVATION (FT)	DEPTH (FT)	SOIL LEGEND	MATERIAL DESCRIPTION AND REMARKS	SOIL TYPE	PENETRATION RESISTANCE (BLOWS/FT.)	SAMPLER	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	PERCENT PASSING NO. 200 SIEVE	Undrained Shear Strength (ksf)							
			SURFACE ELEVATION:							○ Pocket Penetrometer	△ Torvane	● Unconfined Compression	▲ U-U Triaxial Compression				
										1.0	2.0	3.0	4.0				
	0		CLAYEY SAND (SC) [FILL] medium dense, moist, brown, fine to coarse gravel, fine to coarse sand, clay	SC	28	X	5										
	5				32	X	11										
	10		ORGANIC SILTY CLAY (OH) soft, wet, bluish gray, fine sand, shells, interbedded sand lenses	OH	7	○											
	15		CLAYEY SAND (SP-SC) loose, wet, gray, fine sand, shells	SP-SC	7	X	28										
	20				7	X	23		9								
	25		SILTY CLAY (CL) medium stiff, wet, dark gray, moderate plasticity, numerous shells	CL	20	X	39										
	30		Bottom of Boring @ 25 feet.														

GROUND WATER OBSERVATIONS:

▼ : FREE GROUND WATER MEASURED FOLLOWING DRILLING AT 8.0 FEET

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