

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 22, 2010

Mr. Ray Boyer
Caltrans
111 Grand Avenue, Mail Station 8C
Oakland, CA 94612

Subject: Subject: Fuel Leak Case, RO0000051, Caltrans East Bay Service Road Tent, 0 Bay Bridge Toll Plaza, Oakland, CA 94608

Dear Mr. Boyer:

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 at concentrations of up to 3.8 ppm.
- Maximum concentrations of up to 610 ppb TPH as diesel and 120 ppb TPH as kerosene remain in groundwater beneath the site.

If you have any questions, please call Barbara Jakub at (510) 639-1287. Thank you.

Sincerely,

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

Enclosures:

1. Remedial Action Completion Certificate
2. Case Closure Summary

Mr. Boyer
June 22, 2010
Page 2

cc:

Ms. Cherie McCaulou (w/enc) (via electronic
mail: cmccaulou@waterboards.ca.gov)
SF- Regional Water Quality Control Board

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

Leroy Griffin (w/enc via electronic mail:
lgriffin@oaklandnet.com)
Oakland Fire Department

Barbara Jakub (w/ enc via e-mail), D. Drogos (w/ enc via e-mail), T. LeKhan (w/orig enc)

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June 22, 2010

Mr. Ray Boyer
Caltrans
111 Grand Avenue, Mail Station 8C
Oakland, CA 94612

REMEDIAL ACTION COMPLETION CERTIFICATE

Subject: Fuel Leak Case, RO0000051, Caltrans East Bay Service Road Tent, 0 Bay Bridge Toll Plaza, Oakland, CA 94608

Dear Mr. Boyer:

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 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 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

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

I. AGENCY INFORMATION

Date: June 17, 2010

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 639-1287
Responsible Staff Person: Barbara Jakub	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Caltrans East Bay Service Road Tent		
Site Facility Address: 0 Bay Bridge Toll Plaza (North East Access Road, Gate #2, Oakland, CA 94607)		
RB Case No.: 01-1990	Local Case No.: 4901	LOP Case No.: RO0000051
URF Filing Date: 08/18/1994	Geotracker ID: T0600101838	APN: 0-340-1-7
Responsible Parties	Addresses	Phone Numbers
Ray Boyer CALTRANS	111 Grand Ave, Oakland, CA 94612	(510)286-5668

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	500 gallons	Kerosene	removed	7/20/1994
Piping			Assumed disposed with UST	7/20/1994

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: No holes observed in UST upon removal but kerosene odor and staining observed in pit.		
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: 3.5	Lowest Depth: 8.1	Flow Direction: Site immediately adjacent to Bay. Tidal study performed at site, gw flow responds to tides.
Most Sensitive Current Use: Potential drinking water source.		

EXAMPLE:

- * Well properly screened prior to approximately 1994/1995, well screens submerged by up to 7 feet after 1995.
- ** Groundwater gradient has varied 360° at this site.

Summary of Production Wells in Vicinity:	
No water supply wells were identified within ¼-mile of the subject site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? Yes	Nearest SW Name: San Francisco Bay ~300 feet west and east
Off-Site Beneficial Use Impacts (Addresses/Locations): None identified	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and City of Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	500 gallon	Disposed at Erickson, Richmond, CA	7/20/1994
Piping	Not specified	Assumed disposed with UST	7/20/1994
Free Product	None Identified	----	----
Soil	163.29 tons	Bio Industries, Inc. Redbluff, CA	August 1994
Groundwater	None Identified	----	----

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
(Please see Attachments 1 through 6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	8,700*	<1	<50	<50
TPH (Diesel)	4,300*	3.8	610	610
TPH (Kerosene)	5,200	<1	120	120
Oil and Grease	NA	NA	NA	NA
Benzene	<0.005	<0.005	<0.3	<0.3
Toluene	<0.005	<0.005	<0.3	<0.3
Ethylbenzene	<0.005	<0.005	<0.3	<0.3
Xylenes	<0.005	<0.005	<0.3	<0.3
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	67 [^]	0.55 ^{^^}	1.2 ^{^^^}	1.2 ^{^^^}
MTBE ^{**}	NA	NA	NA	NA
Other (8240/8270)	NA	NA	NA	NA

* Laboratory notes that the diesel and gasoline concentrations are kerosene quantified as diesel.

[^] 67 ppm Pb. CD, Cr, Ni and Zn all not analyzed.

^{^^} 0.5 mg/L Pb by STLC. CD, Cr, Ni and Zn all not analyzed.

^{^^^} 1.2 mg/L Pb.

^{**} MTBE analysis not performed, UST stored kerosene.

Site History and Description of Corrective Actions:

The site is located past the toll plaza beneath the Bay bridge. The area is considered industrial.

After the Loma Prieta earthquake Caltrans retrofitted the Bay Bridge upgrading the columns that support the freeway (bents) in the area near the Bay Bridge Toll Plaza. An investigation was performed on the soil in the areas of Bents 24 through 36. In 1994, 21 soil borings were advanced. TRPH was detected at a maximum concentration of 7,800 ppm (B27C1-8). No VOCs were detected in soil. However, SVOCs, organochlorine pesticides and PCBs were detected. Lead was detected above the STLC of 5 ppm. This closure includes the UST removal only and does not include the contamination from the fill material beneath the bridge footings including the SVOC, organochlorine pesticides, PCBs and lead contamination detected in the borings installed to investigate subsurface conditions prior to the retrofit.

On May 25, 1994 three groundwater monitoring wells were installed, none of which were near the kerosene UST located at Bent 31. The well construction is as follows: MW-1 and MW-2 screened between 2 to 22 ft bgs, MW-3 screened from 4 to 24 ft bgs. The wells had aboveground completions with stovepipes. The wells were sampled twice with maximum concentrations of TRPH of 2,000 µg/L in MW-1 which is located between Bents 24 and 25 (no scale on map to determine how far this is).

On July 20, 1994 a 500-gallon kerosene UST was removed from between two columns. Soil samples were collected around the four sides of the tank from a depth of 8.5 ft bgs. Maximum concentrations were 8,700 ppm TPHg, 4,300 ppm TPHd and 5,200 ppm TPHk. Soil from the tank pit was overexcavated to 10.5 feet bgs and samples were collected from the tank bottom and tank pit water on August 30, 1994. The maximum contamination encountered was 3.8 ppm TPHd and 0.15 mg/L lead STLC. No BTEX, TPHg or kerosene was detected in soil. The tank pit water was sampled and contained 610 µg/L TPHd, 120 µg/L TPHk and 1.2 mg/L lead.

A work plan to destroy the monitoring wells was submitted January 17, 1996. The well destruction report is not in the ACEH or Caltrans files. (Caltrans purges files after 7 years.) However, a consultant for Caltrans performed a field inspection and verified that the wells are no longer there.

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 risk to human health based upon current land use and conditions.

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 commercial, residential or other conservative land use scenario occurs 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.

Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

This closure includes the UST removal only and does not include the contamination from the fill material beneath the bridge footings including the SVOC, organochlorine pesticides, PCBs and lead contamination detected in the borings installed to investigate subsurface conditions prior to the retrofit.

This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

Should corrective action be reviewed if land use changes? Yes

Was a deed restriction or deed notification filed? No

Date Recorded: ---

Monitoring Wells Decommissioned: Yes

Number Decommissioned: 3

Number Retained: 0

List Enforcement Actions Taken: None

List Enforcement Actions Rescinded: None

V. ADDITIONAL COMMENTS, DATA, ETC.

Considerations and/or Variances:

- ♦ Disposal destination of soil excavated during UST removal not reported.
- ♦ This closure includes the UST removal only and does not include the contamination from the fill material beneath the bridge footings including the SVOC, organochlorine pesticides, PCBs and lead contamination detected in the borings installed to investigate subsurface conditions prior to the retrofit.

Conclusion:

Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant 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 commercial, residential or other conservative land use scenario occurs at the site. ACEH staff recommend closure for this site.

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Barbara Jakub, P.G.	Title: Hazardous Materials Specialist
Signature: <i>Barbara Jakub</i>	Date: 6/14/10
Approved by: Donna L. Dragos, P.E.	Title: Division Chief
Signature: <i>Donna L. Dragos</i>	Date: 06/17/10

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: 6/17/10	

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: ---	Date of Well Decommissioning Report: ---	
All Monitoring Wells Decommissioned: Yes*	Number Decommissioned: 3*	Number Retained: 0
Reason Wells Retained: ---		
Additional requirements for submittal of groundwater data from retained wells: ---		
ACEH Concurrence - Signature: <i>Barbara Jakub</i>	Date: 6/14/10	

* A work plan to destroy the monitoring wells was submitted January 17, 1996. The well destruction report is not in the ACEH or Caltrans files. (Caltrans purges files after 7 years.) However, a consultant for Caltrans performed a field inspection and verified that the wells are no longer there.

Attachments:

1. Site Vicinity Map (pp1)
2. Site Plans (pps 2-6)
3. Soil Analytical Data (pps7-14)
4. Groundwater Analytical Data (pps 15-20)

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.

Jakub, Barbara, Env. Health

From: Cherie McCaulou [CMccaulou@waterboards.ca.gov]
Sent: Tuesday, June 22, 2010 10:04 AM
To: Jakub, Barbara, Env. Health
Subject: Re: Closure Summaries for RO51 and RO443

Barbara - Thanks for the notification. We have no objection to ACEH's recommendation for case closure of Case #RO000051 Cal Trans Bay Bridge, and Case #RO000443 1935 Washington Street, San Leandro.

Sincerely,

Cherie McCaulou
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
cmccaulou@waterboards.ca.gov
510-622-2342

>>> "Jakub, Barbara, Env. Health" <barbara.jakub@acgov.org> 6/17/2010 2:51 PM >>>

Cherie,

Attached are closure summaries for RO0000051: Caltrans Bay Bridge Toll Plaza located at the Bay Bridge Toll Plaza, Oakland and RO0000443: Unocal #5430 at 1935 Washington St., San Leandro to comply with the RWQCB's 30-day review period. If no comments are received within the 30-day period, ACEH will proceed with case closure.

Please contact me should you have any comments or questions regarding the subject site.

Regards,

Barbara Jakub, P.G.
Alameda County Environmental Health
(510) 639-1287 (direct)
(510) 337-9335 (fax)
barbara.jakub@acgov.org

Online case files are available at the website below
<http://www.acgov.org/aceh/lop/resources.htm>

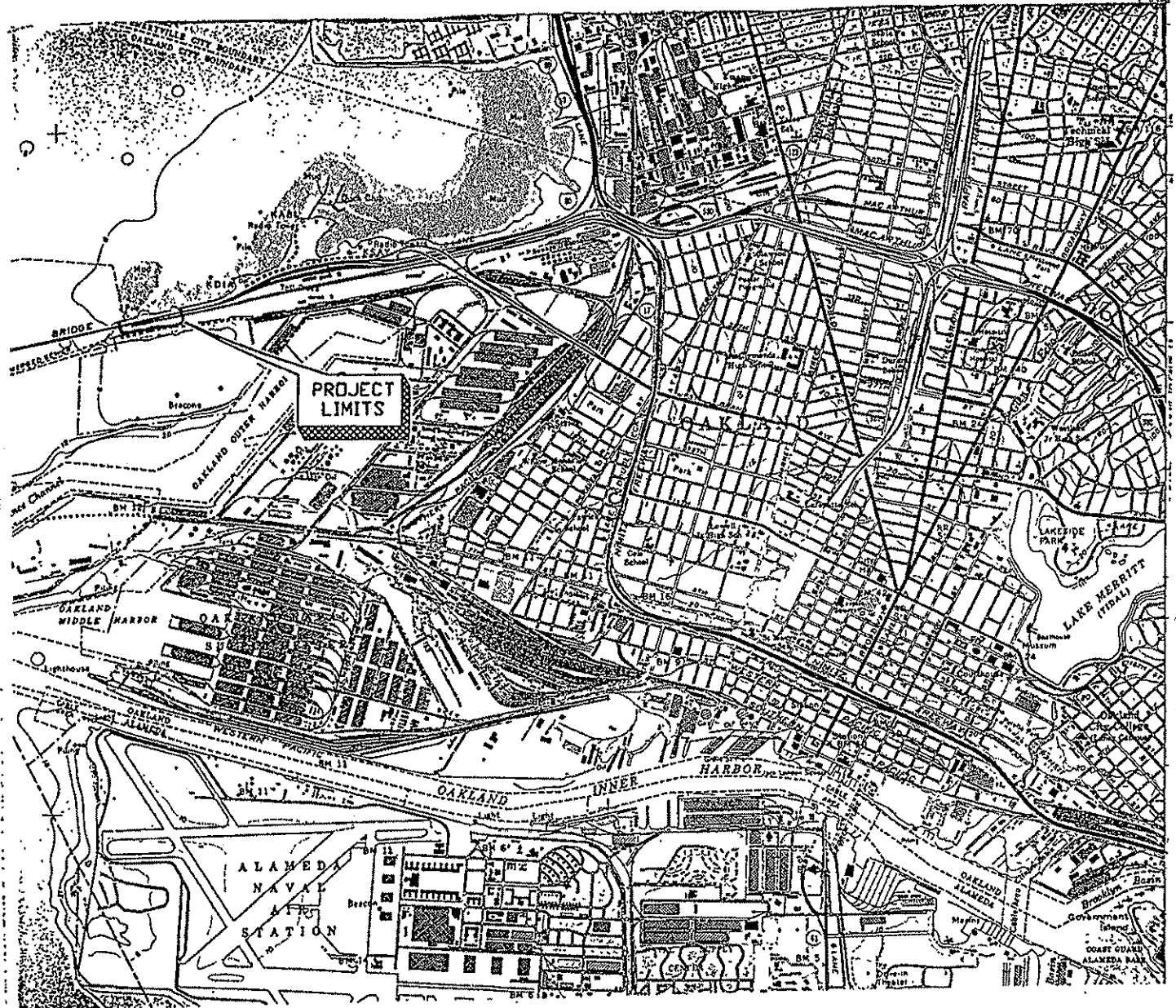



FIGURE 1

SITE LOCATION MAP
OAKLAND BAY BRIDGE

USGS MAP
OAKLAND WEST, QUADRANGLE

PREPARED FOR
CAL. DEPT. OF TRANSPORTATION
DISTRICT 4
OAKLAND, CALIFORNIA

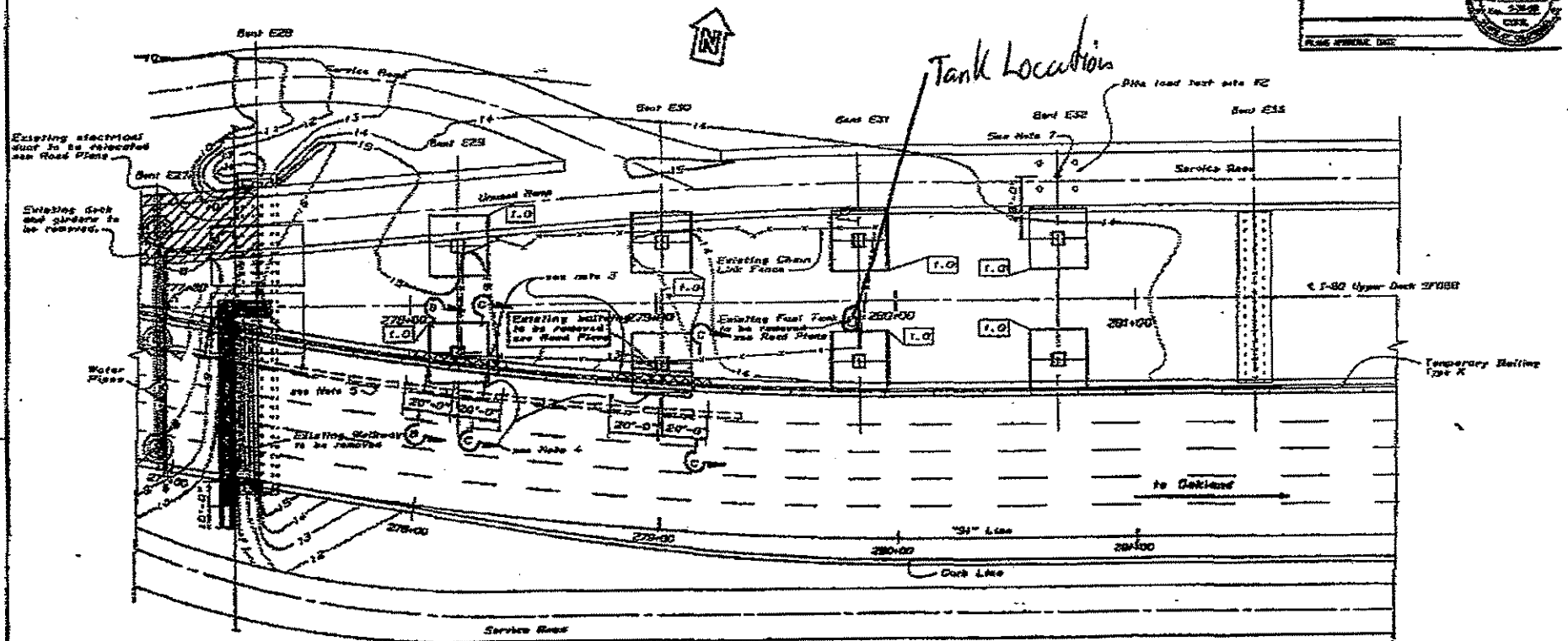


SCALE 1:3000	APPROXIMATE SCALE IN FEET 0 3000 6000		NORTH 	DRAWING NO. 15SDIF1
DRAWN BY	N. MURTHA	01/19/94		
CHECKED BY	N. MURTHA	01/19/94		
APPROVED BY	G. KIRKPATRICK	01/19/94		

Upper Deck not shown for clarity.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL
CONTROLLING FIELD DIMENSIONS
BEFORE ORDERING OR FABRICATING
ANY MATERIAL.

DATE	DRAWN	SCALE	FIELD	PROJECT	DATE	BY
08	ALA	80				
REGISTERED ENGINEER - CIVIL						
PLANS DEPARTMENT						

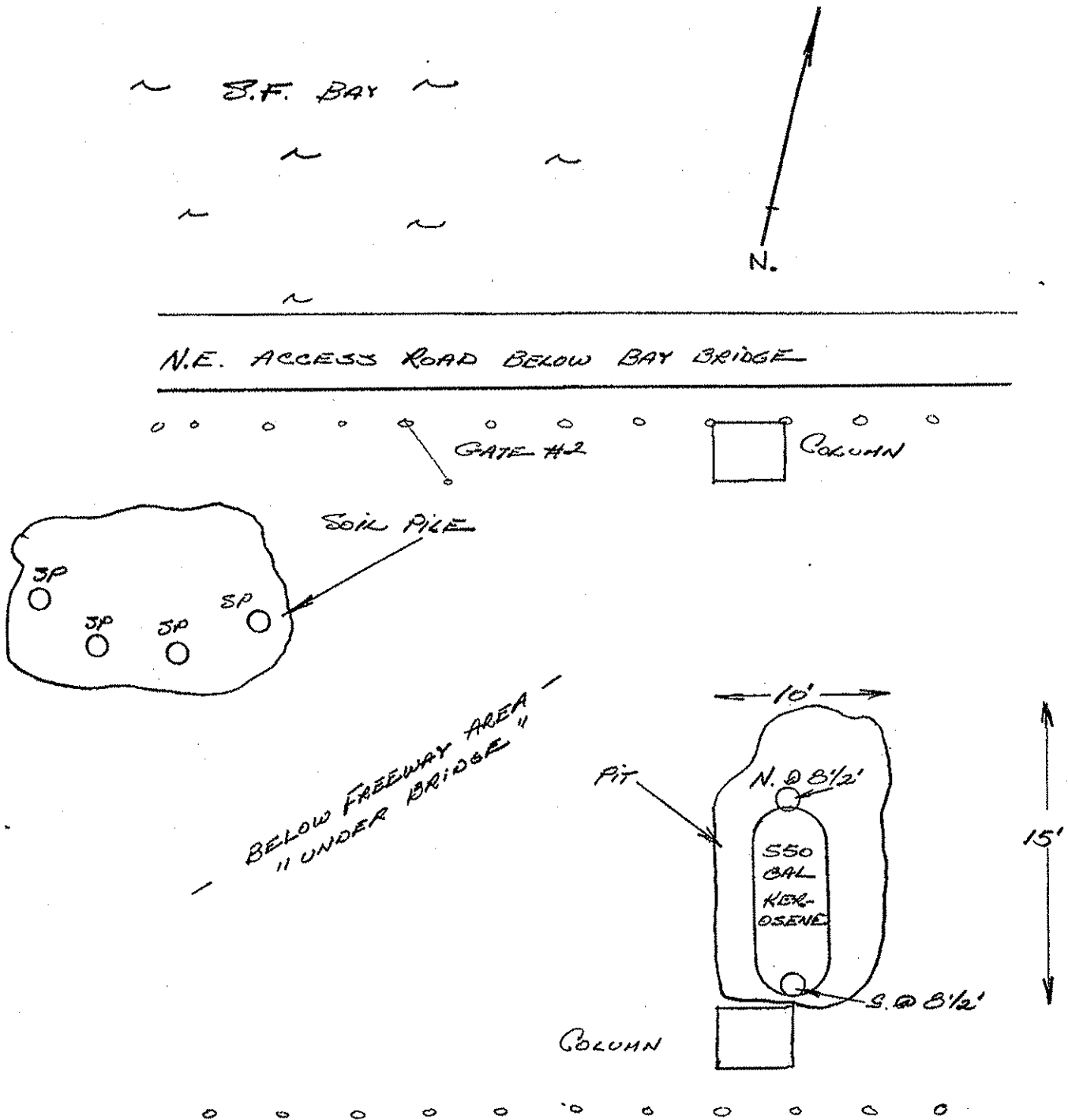


Notes:

1. For staging and striking details, see Plans Page.
2. Slope 1%
-Construct footings and columns of Bents E20, E21, E22, E23, E24, E25 above E23 and E24.
-Construct 8" x 8" pile caps of Bents E24, E25, E26, E27, E28.
3. Remove and reconstruct 48'-0" section of existing barrier, for Spans 0-3 and 4-6, see "Sheet E04-E28 - Barrier Details" sheet.
4. Remove steel cover plate with attached Temporary Shoring Type K to be in place when lane closures are posted.
5. Position Temporary Shoring Type K to protect work area when lane closures are posted and steel cover plate is removed.
6. Method of testing provided indicated by [Symbol].
7. For final site layout and details, see "Sheet E04-E28 - Barrier Details" and "Sheet E29-E30 - Details".

PLAN
1" = 20'-0"

7.20.94 #091.
 UGT PULL FOR
 BEN'S TRUCKING
 BY: ROB



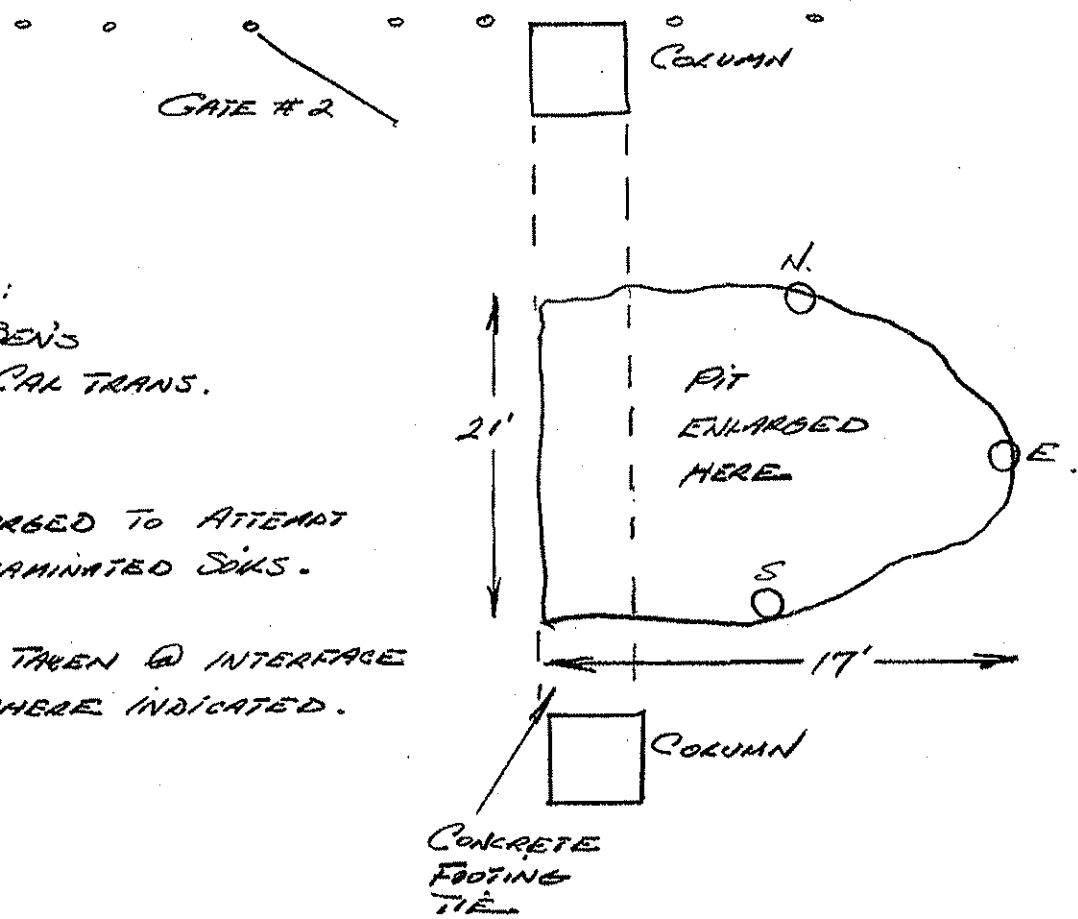
NOTES

1. TANK APPEARED VERY OLD BUT NO HOLES.
2. PIT DEPTH TO BOTTOM OF TANK = 7'. SAMPLES TAKEN @ 8 1/2'.
3. PIT WAS STAINED; CONTAINED KEROSENE ODDOR.
4. PRESENT: WAYNE - BEN'S TRUCKING; STEVE RUSSEL - CAL TRANS; ALLEN BARADAR - CAL TRANS; ALEMEDA COUNTY F.H. & F.D..

#095
8-30-94
UGT. SOIL REMOVAL
BEN'S TRUCKING

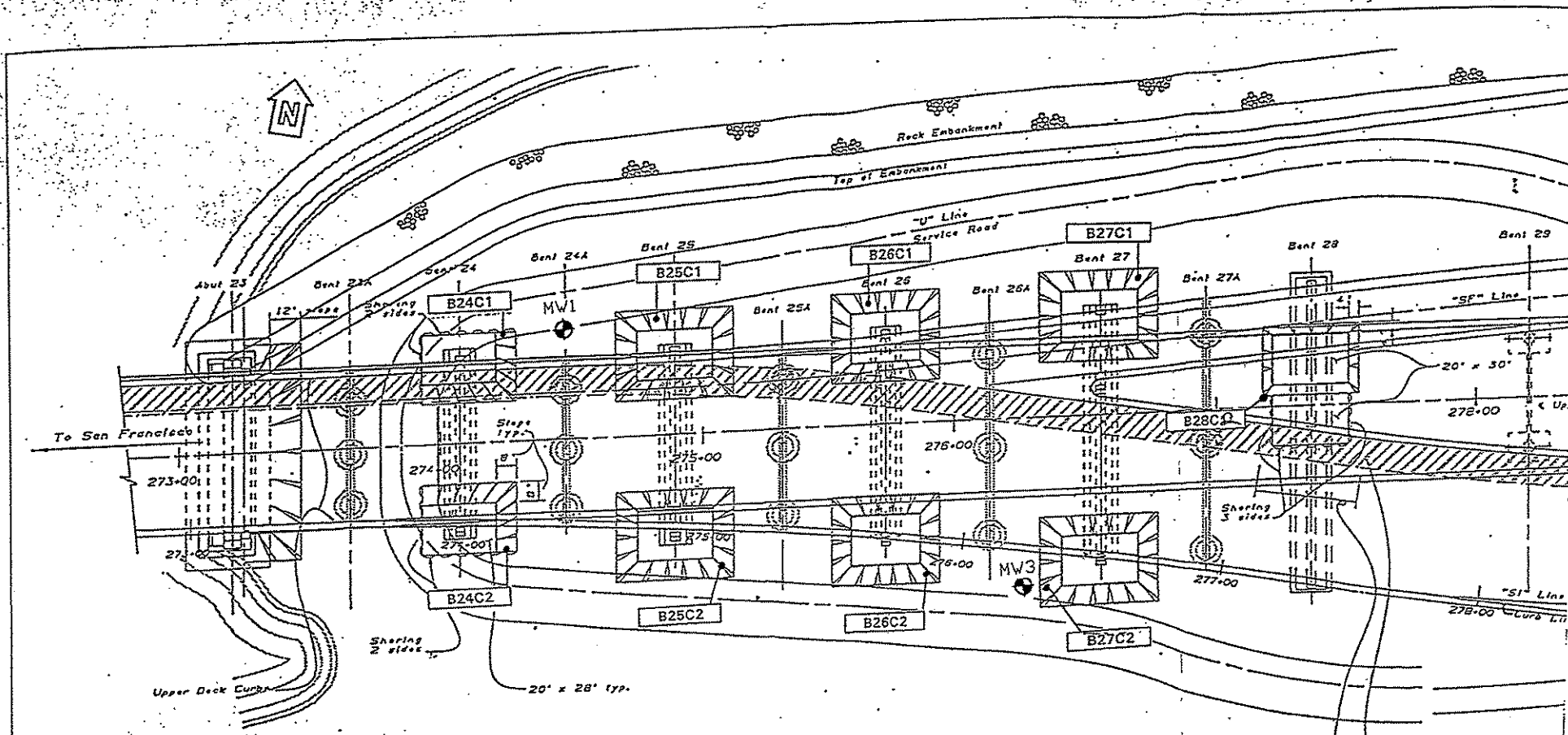


NE. ACCESS RD. BELOW BAY BRIDGE



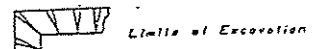
NOTES

1. PERSONS PRESENT:
WAYNE PASCO - BEN'S
STEVE RUSSEL - CAL TRANS.
ROB
2. UGT. WAS ENLARGED TO ATTEMPT
TO REMOVE CONTAMINATED SOILS.
3. SAMPLES WERE TAKEN @ INTERFACE
10'6" DEEP WHERE INDICATED.



Remove 40' section of existing barrier, movable steel cover plate with attached kerf to be in place when lane closure not present. Kerf to be repositioned to protect work area when lane closure present and cover plate is removed.

Crested lane during working hours



LEGEND
 MW1 MONITORING WELL LOCATION

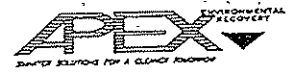
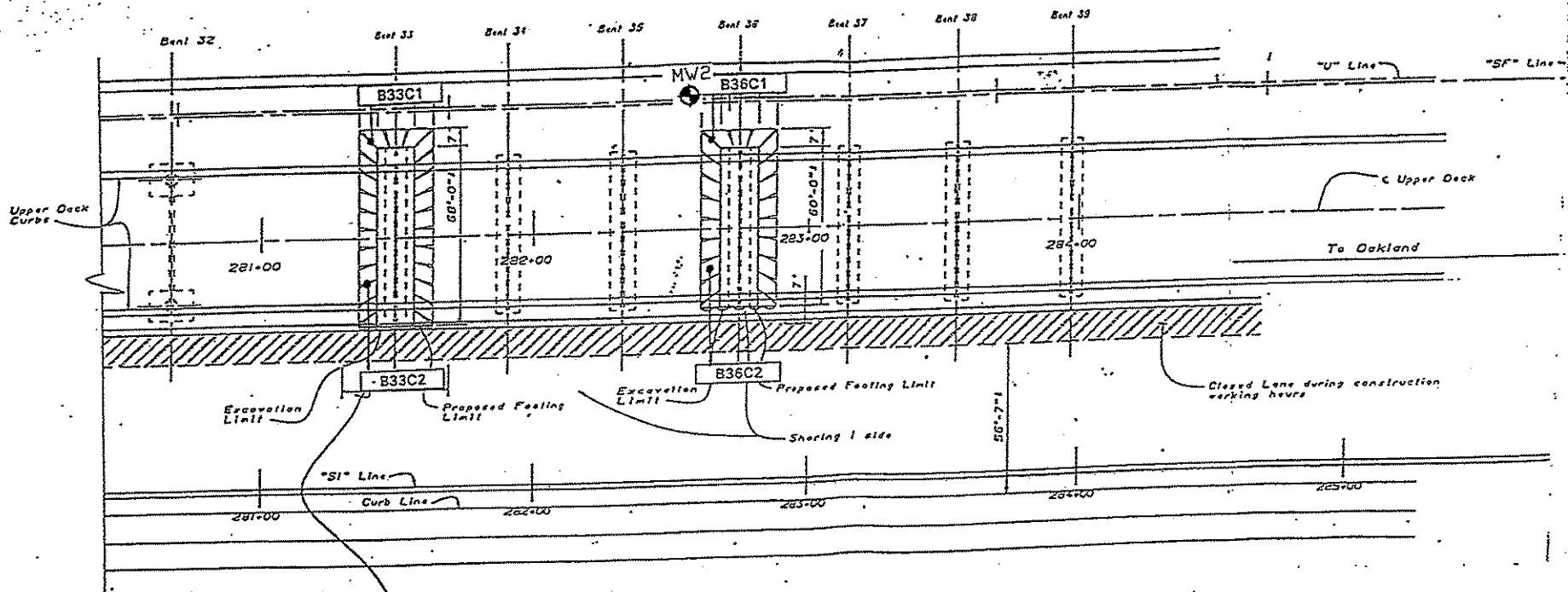


FIGURE 2
 GROUNDWATER MONITORING
 WELL LOCATION MAP
 OAKLAND BAY BRIDGE (EAST BAY SPANS)
 OAKLAND, CALIFORNIA

PREPARED FOR
 CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 4
 T.O. J04-04343K-01

NOT TO SCALE			DRAWING NO. 153D72
DRAWN BY	N. PATEL	01/17/94	
CHECKED BY	N. MURTHA	01/17/94	
APPROVED BY	G. KIRKPATRICK	01/17/94	



Remove 40' section of existing barrier. Moveable steel cover plate with attached K-roll to be in place when lane closure not present. K-roll to be repositioned to protect work area when lane closure present and cover plate is removed.

FIGURE 3
GROUNDWATER MONITORING
WELL LOCATION MAP
OAKLAND BAY BRIDGE (EAST BAY SPANS)
OAKLAND, CALIFORNIA

LEGEND

MW1
MONITORING WELL LOCATION



PREPARED FOR
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 4
T0/04-043434-01

NOT TO SCALE			DRAWING NO. 153BF4
DRAWN BY	N. PATEL	01/17/94	
CHECKED BY	N. MURTHA	01/17/94	
APPROVED BY	C. KIRKPATRICK	01/17/94	



Alpha

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482

CHEMICAL EXAMINATION REPORT (707) 468-0401

Ben's Truck & Equipment, Inc.
2060 Montgomery Road
P O Box 732
Red Bluff, CA 96080
Attn: Wayne Pasco

Date Printed
7/22/94

Page
1

Batch Number 94-0720-032 Receipt Date 07/20/94 16:15 Client BENTRU Client P.O. Send Via Mail

Batch 94-0720-032 consisted of 4 Samples and 29 Tests

Sample 1 South Pit Bottom @ 8.5'
Cal Trans under Bay Bridge
Sample Type: Soil Sampled by: Rob Phillips Sampled: 7/20/94 11:30

BTXE-These detection limits are 60 times higher than usual due to matrix interferences.

* Additional notes for this Sample are printed at the conclusion of the Results Report.

TPH Gasoline W/BTXE	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
TPH - Gasoline	GCFID/5030	7/21	7/21/94	140	ug/g	1	
Benzene	EPA 8020	7/20	7/21/94	ND	ug/g	.3	
Toluene	EPA 8020	7/20	7/21/94	ND	ug/g	.3	
Ethylbenzene	EPA 8020	7/20	7/21/94	ND	ug/g	.3	
Xylenes	EPA 8020	7/20	7/21/94	ND	ug/g	.3	
TPH - Diesel	8015/MOD	7/21	7/21/94	770	ug/g	1	
TPH - Kerosene	8015/MOD	7/21	7/21/94	780	ug/g	1	
Lead	7420		7/22/94	16	mg/kg	5	

Sample 2 North Pit Bottom @ 8.5'
Cal Trans under Bay Bridge
Sample Type: Soil Sampled by: Rob Phillips Sampled: 7/20/94 11:40

BTXE-These detection limits are 100 times higher than usual due to matrix interferences.

* Additional notes for this Sample are printed at the conclusion of the Results Report.

MDL - Minimum Detection Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 7/22/94 *RG*



Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482

CHEMICAL EXAMINATION REPORT (707) 468-0401

Ben's Truck & Equipment, Inc.
2060 Montgomery Road
P O Box 732
Red Bluff, CA 96080
Attn: Wayne Pasco

Date Printed 7/22/94 Page 2

Batch Number 94-0720-032 Receipt Date 07/20/94 16:15 Client BENTRU Client P.O. Send Via Mail

METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
(Sample 2 North Pit Bottom @ 8.5' -- continued)						
TPH Gasoline W/BTXE						
TPH - Gasoline	GCFID/5030	7/20	7/20/94	8700	ug/g	1
Benzene	EPA 8020	7/20	7/20/94	ND	ug/g	.5
Toluene	EPA 8020	7/20	7/20/94	ND	ug/g	.5
Ethylbenzene	EPA 8020	7/20	7/20/94	ND	ug/g	.5
Xylenes	EPA 8020	7/20	7/20/94	ND	ug/g	.5
TPH - Diesel	8015/MOD	7/21	7/21/94	4300	ug/g	1
TPH - Kerosene	8015/MOD	7/21	7/21/94	5200	ug/g	1
Lead	7420		7/22/94	67	mg/kg	5

2 ppm

Sample 3 Soil Pile - Composite
Cal Trans under Bay Bridge
Sample Type: Soil Sampled by: Rob Phillips Sampled: 7/20/94 12:00
BTXE-These detection limits are 60 times higher than usual due to matrix interferences.
* Additional notes for this Sample are printed at the conclusion of the Results Report.

TPH Gasoline W/BTXE						
TPH - Gasoline	GCFID/5030	7/20	7/22/94	71	ug/g	1
Benzene	EPA 8020	7/20	7/21/94	ND	ug/g	.3
Toluene	EPA 8020	7/20	7/21/94	ND	ug/g	.3
Ethylbenzene	EPA 8020	7/20	7/21/94	ND	ug/g	.3
Xylenes	EPA 8020	7/20	7/21/94	ND	ug/g	.3
TPH - Diesel	8015/MOD	7/21	7/21/94	640	ug/g	1
TPH - Kerosene	8015/MOD	7/21	7/21/94	640	ug/g	1

MDL - Minimum Detection Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 7/22/94



Alpha

Alpha Analytical Laboratories Inc. • 860 Waugh Lane, H-1, Ukiah, California 95482

CHEMICAL EXAMINATION REPORT (707) 468-0401

Ben's Truck & Equipment, Inc.
2060 Montgomery Road
P O Box 732
Red Bluff, CA 96080
Attn: Wayne Pasco

Date Printed
7/22/94

Page
3

Batch Number 94-0720-032 Receipt Date 07/20/94 16:15 Client BENTRU Client P.O. Send Via Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
(Sample 3 Soil Pile - Composite -- continued)							
Lead	7420		7/22/94	558	mg/kg	5	
Sample 4 Waste Oil Drum Cat Trans under Bay Bridge Sample Type: Waste Sampled by: Rob Phillips Sampled: 7/20/94 11:45 BTXE-These detection limits are 36,000 times higher than usual due to matrix interferences.							
TPH - Kerosene	8015/MOD	7/21	7/21/94	100	%	0	
Benzene, Toluene, Xylene							
Benzene	EPA 8020	7/21	7/21/94	ND	ug/g	180	
Toluene	EPA 8020	7/21	7/21/94	ND	ug/g	180	
Ethylbenzene	EPA 8020	7/21	7/21/94	ND	ug/g	180	
Xylenes	EPA 8020	7/21	7/21/94	ND	ug/g	180	

MDL - Minimum Detection Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 7/22/94



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Batch Number	Receipt Date	Client	Client P.O.	Send Via
94-0720-032	07/20/94 16:15	BENTRU		Mail

Additional Notes for Sample 1 South Pit Bottom @ 8.5' Cal Trans under Bay Bridge
 The diesel concentrations are kerosene quantified as diesel.
 The gasoline concentrations are kerosene quantified as gasoline.

Additional Notes for Sample 2 North Pit Bottom @ 8.5' Cal Trans under Bay Bridge
 The diesel concentrations are kerosene quantified as diesel.
 The gasoline concentrations are kerosene quantified as gasoline.

Additional Notes for Sample 3 Soil Pile - Composite Cal Trans under Bay Bridge
 The diesel concentrations are kerosene quantified as diesel.
 The gasoline concentrations are kerosene quantified as gasoline.

MDL - Minimum Detection Limit ND - None Detected
 * - Indicates Detection Limit altered due to Sample Dilution

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 7/22/94



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Batch Number	Receipt Date	Client	Client P.O.	Send Via
94-0802-008	07/20/94 16:15	BENYRU		Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
Batch 94-0802-008 consisted of 3 Samples and 6 Tests							
Sample 1	South Pit Bottom - Cal Trans Under Bay Bridge (Refer 94-0720-32-1)						
	Sample Type: Soil	Sampled by: Rob Phillips	Sampled: 7/20/94 11:30				
Lead - STLC		7420	8/05/94	1.4	mg/l	.1	
Sample 2	North Pit Bottom - Cal Trans Under Bay Bridge (Refer 94-0720-32-2)						
	Sample Type: Soil	Sampled by: Rob Phillips	Sampled: 7/20/94 11:40				
Lead - STLC		7420	8/05/94	4.6	mg/l	.1	
Sample 3	Soil Pile Composite - Cal Trans Under Bay Bridge (Refer 94-0720-32-3)						
	Sample Type: Soil	Sampled by: Rob Phillips	Sampled: 7/20/94 12:00				
Lead - STLC		7420	8/05/94	52	mg/l	.1	

MDL - Minimum Detection Limit ND - None Detected
 * - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
 Date Printed: 8/05/94 *Ed*



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Batch Number 94-0831-001
Receipt Date 08/31/94 08:00
Client BENTRU
Client P.O.
Send Via Mail

Batch 94-0831-001 consisted of 3 Samples and 24 Tests

Sample 1 North, Soil @ 10'6" Cal Trans
Under Bay Bridge
Sample Type: Soil Sampled by: Rob Phillips

Sampled: 8/30/94 13:10

METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
TPH Gasoline W/BTXE						
TPH - Gasoline	GCFID/5030	9/09	9/10/94	ND	ug/g	1
Benzene	EPA 8020	9/12	9/12/94	ND	ug/g	.005
Toluene	EPA 8020	9/12	9/12/94	ND	ug/g	.005
Ethylbenzene	EPA 8020	9/12	9/12/94	ND	ug/g	.005
Xylenes	EPA 8020	9/12	9/12/94	ND	ug/g	.005
TPH - Diesel	8015/MOD	9/07	9/08/94	ND	ug/g	1
TPH - Kerosene	8015/MOD	9/07	9/09/94	ND	ug/g	1
Lead - STLC	7420		9/09/94	.15	mg/l	.1

Sample 2 South, Soil @ 10'6" Cal Trans
Under Bay Bridge
Sample Type: Soil Sampled by: Rob Phillips
Analysis of this sample also indicates the presence of hydrocarbons higher in molecular weight than diesel.

Sampled: 8/30/94 13:15

METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
TPH Gasoline W/BTXE						
TPH - Gasoline	GCFID/5030	9/09	9/10/94	ND	ug/g	1
Benzene	EPA 8020	9/12	9/12/94	ND	ug/g	.005
Toluene	EPA 8020	9/12	9/12/94	ND	ug/g	.005
Ethylbenzene	EPA 8020	9/12	9/12/94	ND	ug/g	.005

MDL - Minimum Detection Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 9/13/94



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Batch Number 94-0831-001 Receipt Date 08/31/94 08:00 Client BENTRU Client P.O. Send Via Mail

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
(Sample 2 South, Soil @ 10'6" Cal Trans -- continued)							
Xylenes	EPA 8020	9/12	9/12/94	ND	ug/g	.005	
TPH - Diesel	8015/MOD	9/07	9/08/94	ND = 3.8	ug/g	1	
TPH - Kerosene	8015/MOD	9/07	9/09/94	ND	ug/g	1	
Lead - STLC	7420		9/09/94	.55	mg/l	.1	

Sample 3 East, Soil @ 10'6" Cal Trans Under Bay Bridge

Sample Type: Soil

Sampled by: Rob Phillips

Sampled: 8/30/94 13:20

TPH Gasoline W/BTXE

TPH - Gasoline	GCFID/5030	9/09	9/10/94	ND	ug/g	1	
Benzene	EPA 8020	9/12	9/12/94	ND	ug/g	.005	
Toluene	EPA 8020	9/12	9/12/94	ND	ug/g	.005	
Ethylbenzene	EPA 8020	9/12	9/12/94	ND	ug/g	.005	
Xylenes	EPA 8020	9/12	9/12/94	ND	ug/g	.005	
TPH - Diesel	8015/MOD	9/07	9/08/94	1.1	ug/g	1	
TPH - Kerosene	8015/MOD	9/07	9/08/94	ND	ug/g	1	
Lead - STLC	7420		9/09/94	.12	mg/l	.1	

MDL - Minimum Detection Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 9/13/94



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Batch Number 94-0831-002 Receipt Date 08/31/94 08:00 Client BENTRU Client P.O. Send Via Mail

Batch 94-0831-002 consisted of 1 Sample and 8 Tests

Sample 1 Pit Water - Cal Trans Under Bay Bridge

Sample Type: Water Sampled by: Rob Phillips

Sampled: 8/30/94 13:40

Analysis of this sample also indicates the presence of hydrocarbons higher in molecular weight than diesel.

TPH Gasoline W/BTXE

	METHOD	EXTRACTED	TEST DATE	RESULT	UNITS	MDL	DILUTION
Benzene	602		9/08/94	ND	ug/L	.3	
Toluene	602		9/08/94	ND	ug/L	.3	
Ethylbenzene	602		9/08/94	ND	ug/L	.5	
Total Xylenes	602		9/08/94	ND	ug/L	.5	
TPH - Gasoline	GCFID/5030		9/08/94	ND	ug/L	50	
TPH - Diesel	8015/MOD	9/12	9/13/94	610	ug/L	50	
TPH - Kerosene	8015/MOD	9/12	9/13/94	120	ug/L	50	
Lead GF	239.2		9/09/94	1.2	mg/l	.005	

MDL - Minimum Detection Limit ND - None Detected
* - Indicates Detection Limit altered due to Sample Dilution

NOTES:

Bruce L. Gove
Laboratory Director

Bruce L. Gove
Date Printed: 9/13/94 *RD*

TABLE 1
ANALYTICAL SUMMARY FOR GROUNDWATER
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
San Francisco - Oakland Bay Bridge
East Bay Spans

Groundwater monitoring well samples

Sample No.	Sample Date	418.1 (ppm)
MW 1	6/1/94	0.4
MW 2	6/1/94	0.21
MW 3	6/1/94	0.25
Bay	6/1/94	0.16

ND = Not Detected

TABLE 2
ANALYTICAL SUMMARY FOR GROUNDWATER
ORGANOCHLORINE PESTICIDES AND PCB'S
San Francisco - Oakland Bay Bridge
East Bay Spans

8080 ANALYTE (ppb)	Sample Number and Sample Date					
	MW 1	MW 2	MW 3	Bay		
	6/1/94	6/1/94	6/1/94	6/1/94		
Alpha-BHC	ND	ND	ND	ND		
Gamma-BHC (Lindane)	ND	ND	ND	ND		
Beta-BHC	ND	ND	ND	ND		
Heptachlor	ND	ND	ND	ND		
Delta-BHC	ND	ND	ND	ND		
Aldrin	ND	ND	ND	ND		
Heptachlor Epoxide	ND	ND	ND	ND		
Endosulfan I	ND	ND	ND	ND		
4,4'-DDE	ND	ND	ND	ND		
Dieldrin	ND	ND	ND	ND		
Endrin	ND	ND	ND	ND		
4,4'-DDD	ND	ND	ND	ND		
Endosulfan II	ND	ND	ND	ND		
4,4'-DDT	ND	ND	ND	ND		
Endrin Aldehyde	ND	ND	ND	ND		
Endosulfan Sulfate	ND	ND	ND	ND		
Methoxychlor	ND	ND	ND	ND		
Chlordane	ND	ND	ND	ND		
Toxaphene	ND	ND	ND	ND		
Aroclor-1016	ND	ND	ND	ND		
Aroclor-1221	ND	ND	ND	ND		
Aroclor-1232	ND	ND	ND	ND		
Aroclor-1242	ND	ND	ND	ND		
Aroclor-1248	ND	ND	ND	ND		
Aroclor-1254	ND	ND	ND	ND		
Aroclor-1260	ND	ND	ND	ND		
Aroclor-1262	ND	ND	ND	ND		

NOTE: ND=Not Detected, NA=Not Analyzed

TABLE 3
ANALYTICAL SUMMARY FOR GROUNDWATER
TITLE 22 METALS
San Francisco - Oakland Bay Bridge
East Bay Spans

Metal (ppm)	Maximum Contaminant Level (ppm)	Sample Number and Sample Date				
		MW 1 6/1/94	MW 2 6/1/94	MW 3 6/1/94	Bay 6/1/94	
Antimony	*	ND	ND	ND	0.17	
Arsenic	0.05	ND	ND	ND	ND	
Barium	1	0.47	0.38	0.14	ND	
Beryllium	*	ND	ND	ND	ND	
Cadmium	0.01	ND	ND	ND	ND	
Chromium (Total)	0.05	0.07	0.22	0.06	ND	
Cobalt	*	ND	ND	ND	ND	
Copper	1	0.07	0.06	0.09	ND	
Lead	0.05	ND	ND	0.2	ND	
Mercury	0.002	ND	ND	ND	ND	
Molybdenum	*	ND	ND	ND	ND	
Nickel	0.1	0.06	0.18	0.05	ND	
Selenium	0.01	ND	ND	ND	ND	
Silver	0.05	ND	ND	ND	ND	
Thallium	*	ND	ND	ND	ND	
Vanadium	*	0.09	0.16	0.06	ND	
Zinc	5	0.13	0.22	0.24	ND	

NOTE: ND = Not Detected

TABLE 4
ANALYTICAL SUMMARY FOR GROUNDWATER
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
San Francisco - Oakland Bay Bridge
East Bay Spans
Open borehole samples

Sample No.	Sample Date	418.1 (ppm)
B24C1W	12/30/93	0.2
B25C1W	12/30/93	0.14
B27C2W	12/30/93	ND

ND = Not Detected

TABLE 5
ANALYTICAL SUMMARY FOR GROUNDWATER
TITLE 22 METALS
San Francisco - Oakland Bay Bridge
East Bay Spans
Open Borehole Samples

Metal (ppm)	Maximum Contaminant Level (ppm)	Sample Number and Sample Date					
		B24C1W 12/30/94	B24C1W 12/30/94	B27C2W 12/30/94			
Antimony	*	0.75	0.35	0.57			
Arsenic	0.05	0.001	ND	ND			
Barium	1	ND	ND	ND			
Beryllium	*	ND	ND	ND			
Cadmium	0.01	0.08	0.08	0.06			
Chromium (Total)	0.05	0.2	0.21	0.17			
Cobalt	*	0.59	0.57	0.39			
Copper	1	0.08	0.07	0.05			
Lead	0.05	0.27	0.21	0.11			
Mercury	0.002	ND	ND	ND			
Molybdenum	*	0.22	0.17	ND			
Nickel	0.1	0.61	0.59	0.36			
Selenium	0.01	0.002	ND	ND			
Silver	0.05	0.08	0.07	0.05			
Thallium	*	0.76	0.74	0.54			
Vanadium	*	ND	ND	ND			
Zinc	5	ND	ND	ND			

NOTE: ND = Not Detected

TABLE I
ANALYTICAL SUMMARY FOR WATER

Oakland Bay Bridge
T.O.#04-04343K-01
Oakland, California

					Analyses																																		
Sample No.	Date	Depth to Water (ft)	Hardness	418.1 TRPH (mg/kg)	MCL	6010 metals (mg/L)					PCB's and Pesticides (ug/L)																												
						Arsenic	Cadmium	Chromium(Total)	Lead	Zinc	Alpha-BHC	Gamma-BHC (Lindane)	Beta-BHC	Heptachlor	Delta-BHC	Aldrin	Heptachlor epoxide	Endosulfan I	4,4'-DDE	Dieldrin	Endrin	4,4'-DDD	Endosulfan II	4,4'-DDT	Endrin aldehyde	Endosulfan Sulfate	Methoxychlor	Toxaphene	Chlordane	PCB 1016	PCB 1221	PCB 1232	PCB 1242	PCB 1248	PCB 1254	PCB 1260			
Low Tide																																							
MW1	7/28/94	3.5	5250	2		0.02	<>	0.24	0.47	0.61	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
MW2	7/28/94	8.1	825	<>		0.017	<>	0.34	<>	0.27	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
MW3	7/28/94	7.5	4850	2		0.01	<>	0.06	0.37	0.28	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
Bay	7/28/94	--	5350	<>		0.006	<>	<>	<>	0.018	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
Mid Tide																																							
MW1	8/5/94	4.9	5420	2		0.004	<>	<>	<>	0.03	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
MW2	8/5/94	8.1	710	<>		0.008	<>	0.11	<>	0.2	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
MW3	8/5/94	5.4	5580	1		0.009	<>	0.07	0.3	0.39	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
Bay	8/5/94	--	5960	<>		0.007	<>	<>	<>	0.015	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
High Tide																																							
MW1	7/21/94	3.5	5570	<>		0.013	<>	0.03	0.1	0.084	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
MW2	7/21/94	7.5	499	<>		0.022	<>	0.15	0.14	0.16	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
MW3	7/21/94	5.2	6000	<>		0.019	<>	0.04	0.3	0.19	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	
Bay	7/21/94	--	--	<>		0.019	<>	<>	0.09	0.011	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	<>	

-- = Not Analyzed <> = Not Detected

TRPH + lead