

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



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

REMEDIAL ACTION COMPLETION CERTIFICATION

May 13, 1997

Mr. A.V. Barnhill
Barnhill Construction Co.
2394 Mariner Square Dr.
Alameda, CA 94501

Re: Barnhill Construction, 2394 Mariner Square Drive, Alameda, CA
94501-One former 500-gallon diesel and one 1,000-gallon gasoline
underground storage tank.

STID: 4818

Dear Mr. Barnhill,

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 tanks 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, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721(e) of Title 23 of the California Code of Regulations.

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

Sincerely,

Mee Ling Tung
Director of Environmental Health Services

c: Chief, Hazardous Materials Division - files
Juliet Shin, ACDEH
Kevin Graves, RWQCB
Lori Casias, SWRCB (w/ Case Closure Summary)

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

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

May 13, 1997

Mr. A.V. Barnhill
Barnhill Construction Company
2394 Mariner Square Drive
Alameda, CA 94501

Re: Fuel Leak Site Case Closure-Barnhill Construction Company, 2394
Mariner Square Drive, Alameda, California; STID 4818

Dear Mr. Barnhill,

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 Protection Division 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:

- o Low levels of TPH as diesel, at ~180 parts per billion, remain in the groundwater adjacent to the former USTs at the site.

If you have any questions, please contact me at (510)567-6700. Thank you.

Sincerely,

Juliet Shin
Senior Hazardous Materials Specialist

Enclosures:

1. Case Closure Letter
2. Case Closure Summary

01-2225-
need to input

APR 12 11:12 AM '97
ST 12 11:12 AM '97
AL12:03

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: March 27, 1997

Agency name: Alameda County-HazMat
City/State/Zip: Alameda, CA 94502
Responsible staff person: Juliet Shin

Address: 1131 Harbor Bay Pkwy.
Phone: (510) 567-6700
Title: Senior HMS

II. CASE INFORMATION

Site facility name: Barnhill Construction
Site facility address: 2394 Mariner Square Drive, Alameda, CA 94501
RB LUSTIS Case No: N/A **Local Case No./LOP Case No.:** 4818
URF filing date: 4/14/97 **SWEEPS No:** N/A

<u>Responsible Parties:</u>	<u>Addresses:</u>	<u>Phone Numbers:</u>
Mr. A.V. Barnhill Barnhill Construction Co.	2394 Mariner Square Dr. Alameda, CA 94501	(510)521-8387

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	500	diesel	removed	10/6/95
2	1,000	gasoline	removed	10/6/95

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Holes noted in both the 500-gallon and 1,000-gallon USTs.

Site characterization complete? YES

Date approved by oversight agency: 3/27/97

Monitoring Wells installed? No. However, three hydropunches (geoprobes) emplaced around tank pit.

Proper screened interval? Yes. Hydropunches were screened from ~3- to ~8-feet below ground surface (bgs).

Highest GW depth below ground surface: Depth to groundwater was measured to be roughly 4- to 5-feet bgs, both during tank removal activities and during the hydropunch investigations.

Leaking Underground Fuel Storage Tank Program

Flow direction: **Unknown. Most likely groundwater flows towards the Oakland Inner Harbor to the north or towards the Posey Tube to the east.**

Most sensitive current use: **Commercial**

Are drinking water wells affected? **No** Aquifer name: **Merritt Sand**

Is surface water affected? **No** Nearest affected SW name:---

Off-site beneficial use impacts (addresses/locations): **None**

Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
 1131 Harbor Bay Pkwy.
 Alameda, CA 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> (include units)	<u>Action (Treatment or Disposal w/destination)</u>	<u>Date</u>
Tanks	Two USTs (One 500 gallon & one 1,000 gallon)	Erickson 255 Parr Blvd. Richmond, CA 94801	10/6/95

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued)

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before ¹	After	Before ²	After ³
TPH (Gas)	1.0		6,000	ND
TPH (Diesel)	ND		1,000	180
Benzene	ND		ND	ND
Toluene	ND		24	ND
Total Xylenes	0.019		350	ND
Ethylbenzene	ND		13	ND
Methyl-Tert Butyl Ether	NA	ND ⁴	NA	ND
Total lead	39		NA	NA

NA- Not Analyzed

ND- Not Detected

- 1-From samples collected from the sidewalls of the tank pit during the tank removal.
- 2-From "grab" groundwater sample collected from the tank pit during the tank removal.
- 3-From "grab" groundwater samples collected from the hydropunch locations.
- 4-From soil sample collected from the hydropunch locations.

Leaking Underground Fuel Storage Tank Program

Comments (Depth of Remediation, etc.): See "Additional Comments" section.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? _____

Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? _____

Does corrective action protect public health for current land use? **YES**


Site management requirements: **NO**

Should corrective action be reviewed if land use changes? **YES**

List enforcement actions taken: **None**

V. LOCAL AGENCY REPRESENTATIVE DATA

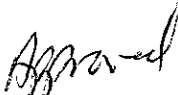
Name: **Juliet Shin** Title: **Senior HMS**
Signature:  Date: **4/8/97**


Reviewed by
Name: **Eva Chu** Title: **Hazardous Materials Specialist**
Signature:  Date: **4/7/97**

Name: **Thomas Peacock** Title: **Supervising HMS**
Signature:  Date: **4-30-97**

VI. RWQCB NOTIFICATION

Date Submitted to RB:
RWQCB Staff Name: Kevin Graves

RB Response: 
Title: San. Engineering Asso. Date:

 **5/7/97**

Leaking Underground Fuel Storage Tank Program

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site fronts the Oakland Inner Harbor and is currently occupied by the Barnhill Construction Company. On October 6, 1995, one 500-gallon diesel underground storage tank (UST) and one 1,000-gallon gasoline UST were removed from the site. These two USTs were located adjacent to one another in a common tank pit which was located only 90 feet south of the Oakland Inner Harbor (refer to attached figures).

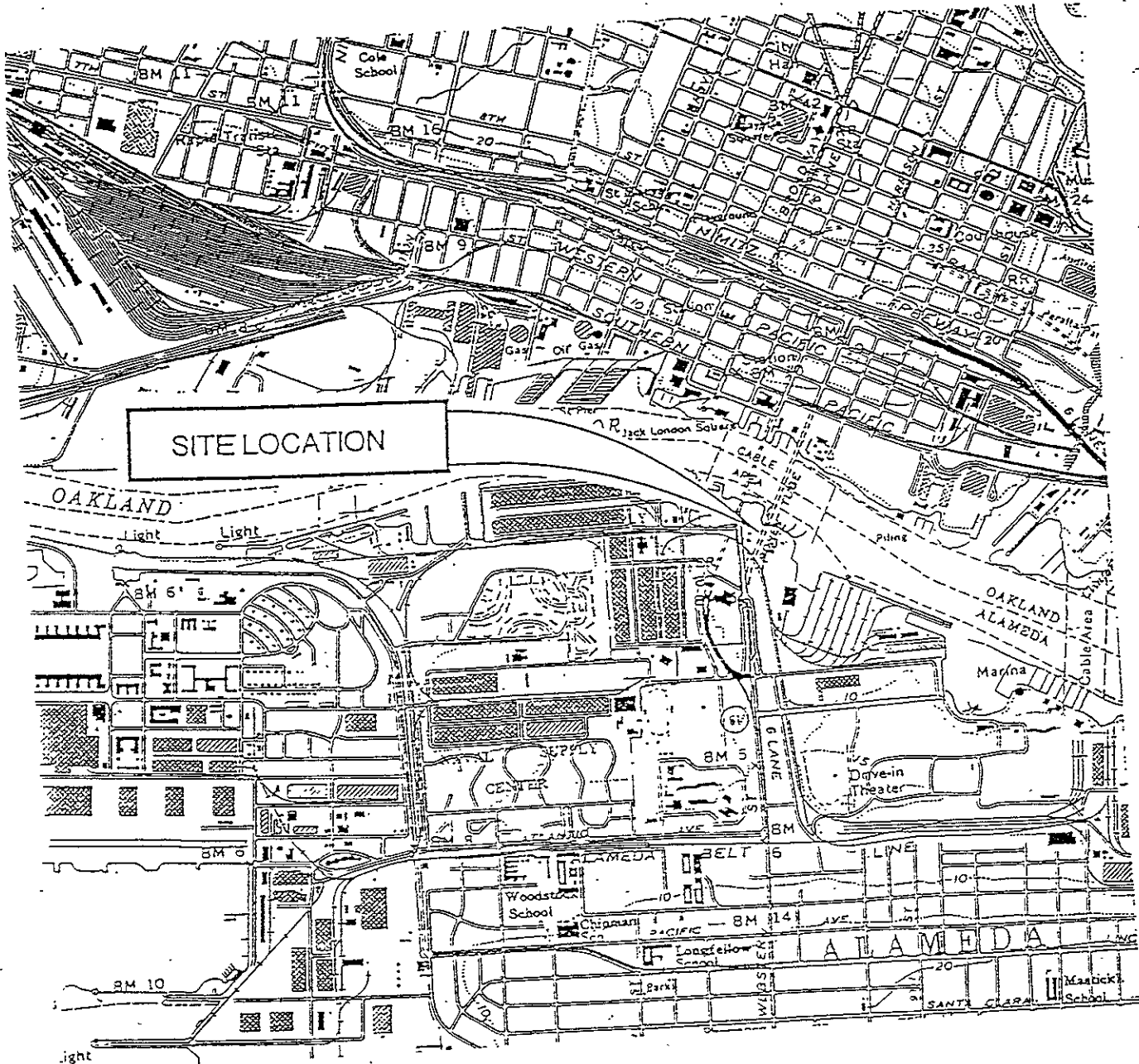
Groundwater was observed in the tank pit. Sidewall soil samples were collected from each end of the two USTs at the soil/water interface and analyzed for Total Petroleum Hydrocarbons as gasoline (TPHg), TPH as diesel (TPHd), lead, and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Analysis of these soil samples identified up to 1 parts per million (ppm) TPHg, 0.019ppm total xylenes, and 39ppm lead. No other constituents were identified above detection limits (refer to attached analytical results).

One "grab" groundwater sample was collected and analyzed for the same constituents as the soil samples. Analytical results of the groundwater sample identified 6,000 parts per billion (ppb) TPHg, 1,000 ppb TPHd, 24ppb toluene, 13ppb ethylbenzene, and 350ppb total xylenes. No other constituents were identified above detection limits.

Based on the elevated contaminant concentrations identified in the "grab" groundwater sample collected from the tank pit, additional soil and groundwater investigations were conducted on January 30, 1997. Three hydropunches (GP-1 through GP-3) were emplaced around the former tank pit, and one soil and one groundwater sample were collected from each location. Soil samples were collected from these hydropunch locations at the soil/water interface (4- to 5-foot bgs) and analyzed for TPHd, TPHg, Methyl-Tert Butyl Ether (MTBE) and BTEX. Groundwater samples were collected with a 5-foot screen length extending from ~3- to 8-foot bgs. Depth to groundwater during this investigation was identified at ~4-foot bgs. The groundwater samples were analyzed for the same constituents as the soil samples. Analysis of the soil samples did not identify any contaminants above detection limits. Analysis of groundwater samples identified TPHd in each hydropunch location, with concentrations ranging from 130ppb to 180ppb. No other contaminants were identified in the groundwater samples (refer to attached sample results and figures showing sample locations).

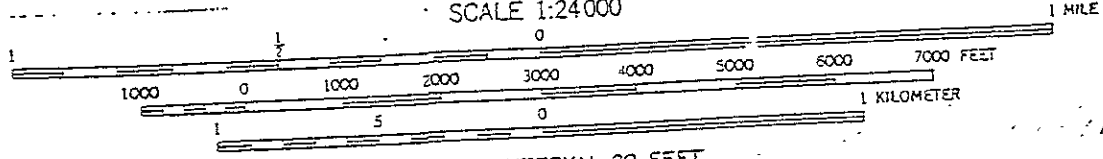
This office is recommending case closure for the site, based on the following rationale:

- o Contaminant concentrations identified in the soil from the tank removal and the hydropunch investigations were low to Non Detect and never exceeded threshold values given in the American Society for Testing and Materials' Risk-Based Corrective Action guidelines (E 1739-95) and the Preliminary Remediation Goals established by Region IX of the United States Environmental Protection Agency.
- o Although the initial "grab" groundwater sample collected from the tank pit during the UST removal identified elevated concentrations of TPHg, TPHd, and TEX, the extent of this contamination appears to be very limited in extent based on the Non Detect concentrations of TPHg and BTEX and the low concentrations of TPHd identified in the "grab" groundwater samples collected from the three hydropunches, all located within ten feet of the tank pit. The low concentrations of TPHd identified from the hydropunch groundwater samples are below some secondary drinking water standards and are roughly commensurate to the proposed threshold value of 100ppb for TPHd in groundwater adjacent to surface waters (RWQCB Board Order 95-136), which was established based on investigations adjacent to the San Francisco Bay.



SITE LOCATION

SCALE 1:24000



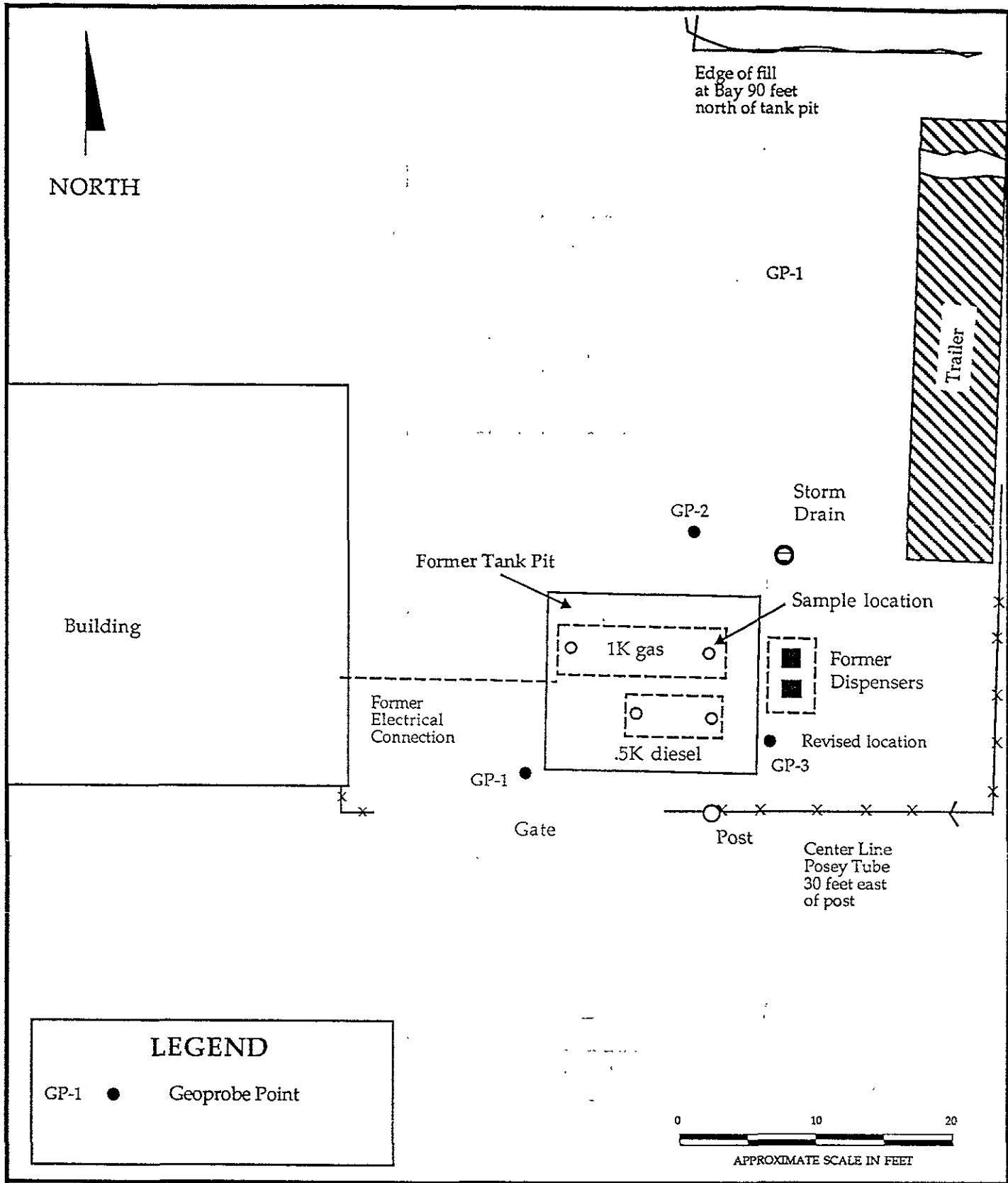
SOURCE: USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)
 TITLED: OAKLAND WEST, CALIF. QUADRANGLE
 PHOTOREVISED 1980

NORTH

HYDR -
 ENVIRONMENTAL
 TECHNOLOGIES, INC.

SITE LOCATION MAP
 Barnhill Construction
 2394 Mariner Square Drive
 Alameda, CA

Figure
 1
 7-309 11/9



LEGEND

GP-1 ● Geoprobe Point

0 10 20
 APPROXIMATE SCALE IN FEET

HYDR -
ENVIR NMENTAL
TECHN OLOGIES, INC.

SITE PLAN
 Barnhill Construction
 2394 Mariner Square Drive
 Alameda, California

Figure
 2
 7-309 2/97

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy.
Suite 250
Alameda, CA 94502-6577
(510) 567-6700

II, III

Site ID # _____ Site Name Barthel Construct Today's Date 10/6/95

Site Address 2394 Mariner Sq.

City Alameda Zip 94502 Phone _____

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- II. Business Plans, Acute Hazardous Materials
- III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

Came out to site to oversee removal of 1,500-gallon gasoline and 500-gallon diesel UST. The gas UST is actually a 1,000-gallon. Stained soils observed on bottom of tank, tar wrapping on tank. Odes coming from tank. Hole noted on bottom of tank - the size of a screw driver. Tank well wrapped before hauling. The diesel UST was laying alongside the gas UST in the same pit. Stained soil was also observed at bottom of diesel UST. All tar wrapping still on diesel UST. No holes observed. Fill end for both tanks were on west end, pump end was on east end. Groundwater observed in pit. Actually, one 4" open-size hole noted on side of diesel UST. Tar wrapping bubbled a little w/ water underneath. Two soil samples will be collected from the ends of the diesel UST at soil/water interface. Two soil samples will also be collected

II.A BUSINESS PLANS (Title 19)

- 1. Immediate Reporting 2703
- 2. Bus. Plan Stds. 25503(b)
- 3. RR Cars > 30 days 25503.7
- 4. Inventory Information 25504(a)
- 5. Inventory Complete 2730
- 6. Emergency Response 25504(b)
- 7. Training 25504(c)
- 8. Deficiency 25505(a)
- 9. Modification 25505(b)

II.B ACUTELY HAZ MATLS

- 10. Registration Form Filed 25533(a)
- 11. Form Complete 25533(b)
- 12. RMPP Contents 25534(a)
- 13. Implement Sch. Req'd? (Y/N) _____
- 14. OffSite Conseq. Assess. 25524(c)
- 15. Probable Risk Assessment 25534(d)
- 16. Persons Responsible 25534(g)
- 17. Certification 25534(f)
- 18. Exemption Request? (Y/N) 25536(b)
- 19. Trade Secret Requested? 25538

III. UNDERGROUND TANKS (Title 23)

- | | |
|--|---|
| General | <input type="checkbox"/> 1. Permit Application 25284 (H&S) |
| | <input type="checkbox"/> 2. Pipeline Leak Detection 25292 (H&S) |
| | <input type="checkbox"/> 3. Records Maintenance 2712 |
| | <input type="checkbox"/> 4. Release Report 2651 |
| | <input type="checkbox"/> 5. Closure Plans 2670 |
| Monitoring for Existing Tanks | <input type="checkbox"/> 6. Method |
| | 1) Monthly Test |
| | 2) Daily Vadose
Semi-annual groundwater
One time soils |
| | 3) Daily Vadose
One time soils
Annual tank test |
| | 4) Monthly Groundwater
One time soils |
| | 5) Daily Inventory
Annual tank testing
Cont pipe leak det
Vadose/gndwater mon. |
| | 6) Daily Inventory
Annual tank testing
Cont pipe leak det |
| | 7) Weekly Tank Gauge
Annual tank testing |
| | 8) Annual Tank Testing
Daily Inventory |
| | 9) Other _____ |
| New Tanks | <input type="checkbox"/> 7. Precip Tank Test 2643 |
| | Date: _____ |
| | <input type="checkbox"/> 8. Inventory Rec. 2644 |
| | <input type="checkbox"/> 9. Soil Testing . 2646 |
| <input type="checkbox"/> 10. Ground Water. 2647 | |
| <input type="checkbox"/> 11. Monitor Plan 2632 | |
| <input type="checkbox"/> 12. Access. Secure 2634 | |
| <input type="checkbox"/> 13. Plans Submit 2711 | |
| Date: _____ | |
| <input type="checkbox"/> 14. As Built 2635 | |
| Date: _____ | |

Contact: George Wilson, LW

Title: [Signature]

Signature: [Signature]

Inspector: Juliet Shih

Signature: [Signature]

II, III

1970
 white -env.health
 yellow -facility
 pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH
 Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy.
 Suite 250
 Alameda, CA 94502-6577
 (510) 567-6700

II, III

Site ID # _____ Site Name Barnhill Construct Today's Date 10/6/95

Site Address 2394 Mariner Sq Dr

City Alameda Zip 94502 Phone _____

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

- II.A BUSINESS PLANS (Title 19)
- ___ 1. Immediate Reporting 2703
 - ___ 2. Bus Plan Stds. 25503(b)
 - ___ 3. RR Cars > 30 days 25503.7
 - ___ 4. Inventory Information 25504(a)
 - ___ 5. Inventory Complete 2730
 - ___ 6. Emergency Response 25504(b)
 - ___ 7. Training 25504(c)
 - ___ 8. Deficiency 25505(a)
 - ___ 9. Modification 25505(b)

- II.B ACUTELY HAZ MATLS
- ___ 10. Registration Form Filed 25533(a)
 - ___ 11. Form Complete 25533(b)
 - ___ 12. RMPP Contents 25534(c)
 - ___ 13. Implement Sch. Req'd? (Y/N) _____
 - ___ 14. OffSite Conseq. Assess. 25524(c)
 - ___ 15. Probable Risk Assessment 25534(d)
 - ___ 16. Persons Responsible 25534(g)
 - ___ 17. Certification 25534(f)
 - ___ 18. Exemption Request? (Y/N) 25536(b)
 - ___ 19. Trade Secret Requested? 25538

- Inspection Categories:
- ___ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
 - ___ II. Business Plans, Acute Hazardous Materials
 - ___ III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

III. UNDERGROUND TANKS (Title 23)

- General
- ___ 1. Permit Application 25284 (H&S)
 - ___ 2. Pipeline Leak Detection 25292 (H&S)
 - ___ 3. Records Maintenance 2712
 - ___ 4. Release Report 2651
 - ___ 5. Closure Plans 2670
- Monitoring for Existing Tanks
- ___ 6. Method
 - 1) Monthly Test
 - 2) Daily Vadose
 - Semi-annual groundwater
 - One time soils
 - 3) Daily Vadose
 - One time soils
 - Annual tank test
 - 4) Monthly Gndwater
 - One time soils
 - 5) Daily Inventory
 - Annual tank testing
 - Cont pipe leak det
 - Vadose/gndwater mon
 - 6) Daily Inventory
 - Annual tank testing
 - Cont pipe leak det
 - 7) Weekly Tank Gauge
 - Annual tank teting
 - 8) Annual Tank Testing
 - Daily Inventory
 - 9) Other _____
- New Tanks
- ___ 7. Precis Tank Test Date: _____ 2643
 - ___ 8. Inventory Rec. 2644
 - ___ 9. Soil Testing . 2646
 - ___ 10. Ground Water. 2647
 - ___ 11. Monitor Plan 2632
 - ___ 12. Access. Secure 2634
 - ___ 13. Plans Submit Date: _____ 2711
 - ___ 14. As Built Date: _____ 2635

Manufact # 95269852

Comments:
 from the grids of the gas UST at the soil/water interface. All 14 soil samples will be analyzed for TPH9, TPHd, + BTEX. One "grab" groundwater sample will be collected and analyzed for these same constituents. The diesel UST was also wrapped. Odor from pit. Sample collected from east end of diesel UST was stained, sandy (clay w/ some rock & gravel) & slight odor. Sample collected from west end of diesel UST was sandy, stained, w/ odor. Depth to g.w. was at ~5' bgs. Soil sample collected from the west end of the gas UST was very wet, sandy, & stained w/ odor. As they excavated below water, they ran across greater amounts of stained soil & what looked like product. Sample was collected from east side of gas UST. Sandy, wet soil w/ slight staining. All soil samples were collected from about 4-10' bgs. Some product noted on ground water. 8 VOA vials of water sample collected. Since product was observed in water, fairly certain g.w. is contaminated.

Contact: George Wilson, LW Inspector: Juliet Shin
 Title: Vice Signature: Juliet Shin
 Signature: [Signature]

ten in pit was so disturbed.

will be requested. So might not be essential to analyze "grab" g.w. sample, since the



North State Environmental
 Chemical Waste Disposal - Trucking - Consulting

C E R T I F I C A T E O F A N A L Y S I S

JOB NO: 95-528
 CLIENT: L&W ENVIRONMENTAL
 PROJECT NAME: 5553

DATE SAMPLED: 10-06-95
 DATE EXTRACTED: 10-09-95
 DATE ANALYZED: 10-09-95

BTXE AND GASOLINE RANGE ORGANICS BY
 EPA METHOD 8020/5030 AND 8015 M
 DIESEL RANGE HYDROCARBONS BY EPA METHOD 8015 M
 LEAD BY EPA METHOD 7420

Sample No.	Client ID	Analyte	Result
95-528-01	5553-T1-W.E	Benzene	ND
		Toluene	ND
		Ethylbenzene	ND
		Xylenes	19
		Gasoline	1
		Diesel	ND
		Lead	ND
95-528-02	5553-T1-R.E	Benzene	ND
		Toluene	ND
		Ethylbenzene	ND
		Xylenes	ND
		Gasoline	ND
		Diesel	ND
		Lead	ND
95-528-03	5553-T1-S.P	Benzene	ND
		Toluene	ND
		Ethylbenzene	ND
		Xylenes	ND
		Gasoline	ND
		Diesel	ND
		Lead	27
95-528-04	5553-T2-W.E	Benzene	ND
		Toluene	ND
		Ethylbenzene	ND
		Xylenes	ND
		Gasoline	ND
		Diesel	ND
		Lead	39


North State Environmental
 Chemical Waste Disposal - Trucking - Consulting
C E R T I F I C A T E O F A N A L Y S I S

JOB NO: 95-528

DATE SAMPLED: 10-06-95

CLIENT: L&W ENVIRONMENTAL

DATE EXTRACTED: 10-09-95

PROJECT NAME: 5553

DATE ANALYZED: 10-09-95

BTX AND GASOLINE RANGE ORGANICS BY
 EPA METHOD 8020/5030 AND 8015 M
 DIESEL RANGE HYDROCARBONS BY EPA METHOD 8015 M
 LEAD BY EPA METHOD 7420

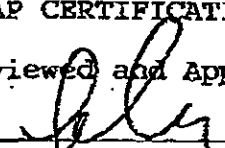
Sample No.	Client ID	Analyte	Result
95-528-05	5553-T2-E.E	Benzene	ND
		Toluene	ND
		Ethylbenzene	ND
		Xylenes	ND
		Gasoline	ND
		Diesel	ND
		Lead	ND
95-528-06	5553-T2-S.P	Benzene	ND
		Toluene	ND
		Ethylbenzene	ND
		Xylenes	ND
		Gasoline	ND
		Diesel	ND
		Lead	ND

Quality Control Quality Assurance Summary: Soil

Analyte	Method	Reporting limit	Blank	MS/MSD Recovery	RPD
Benzene	8020	5 ug/Kg	ND	AVG 100%	9
Toluene	8020	5 ug/Kg	ND		
Ethylbenzene	8020	5 ug/Kg	ND		
Xylenes	8020	10 ug/Kg	ND		
Gasoline	8015/5030	0.5 mg/Kg	ND	AVG 92%	1
Diesel	8015 M	1 mg/Kg	ND	AVG 90%	1
Lead	7420	5 mg/Kg	ND	AVG 101%	2

ELAP CERTIFICATION NUMBER 1753

Reviewed and Approved by


 John Murphy
 Laboratory Director

Page 2 of 2

CHAIN OF CUSTODY

REG RUSH 9528

SAMPLER(S) (Signature) *[Signature]*

PROJECT NAME(S) (Print) *TANK REMOVAL* JOB NUMBER: **5553**

DESCRIPTION: *TANK REMOVAL*

ADDRESS: *MARINER 53, DR*

CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION	ANALYSIS REQUESTED							REMARKS		
						TOTAL PETROLEUM HYDROCARBONS	BTEX	VOC - EPA 8246	TOTAL OIL AND GREASE	LEAD TOTAL - EPA 8270	METALS				
5553-T1-WE	10/4/95	11:51	X		TANK 1 WEST END 5' (SAND)	X	X								
5553-T1-EE		11:49	X		TANK 1 EAST END 5' (SAND)	X	X								
5553-T1-OP		11:50	X		TANK 1 Spill Sample (SAND)	X	X								
5553-T2-WE		11:15	X		TANK 2 WEST END 5' (SAND)	X	X								
5553-T2-EE		11:30	X		TANK 2 EAST END 5' (SAND)	X	X								
5553-T2-SP		11:52	X		TANK 2 Spill Sample (SAND)	X	X								

RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE: 10/6/95 TIME: 4:00pm	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 10/6/95 TIME: 4:00pm
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE: 10/6/95 TIME: 4:20pm	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 10-6-95 TIME: 4:20pm
RELINQUISHED BY: (Signature)	DATE: _____ TIME: _____	RECEIVED BY: (Signature)	DATE: _____ TIME: _____
RELINQUISHED BY: (Signature)	DATE: _____ TIME: _____	RECEIVED BY: (Signature)	DATE: _____ TIME: _____



North State Environmental
 Chemical Waste Disposal - Tracking - Consulting

C E R T I F I C A T E O F A N A L Y S I S

JOB NO: 95-527
 CLIENT: L&W ENVIRONMENTAL
 PROJECT NAME: 5553

DATE SAMPLED: 10-06-95
 DATE EXTRACTED: 10-09-95
 DATE ANALYZED: 10-09-95

BTXEM AND GASOLINE RANGE ORGANICS BY
 EPA METHOD 8020/5030 AND 8015 M
 DIESEL RANGE HYDROCARBONS BY EPA METHOD 8015 M

Sample No.	Client ID	Analyte	Result
95-527-01	5553-W	Benzene	ND < 2.5 ug/L
		Toluene	24 ug/L
		Ethylbenzene	13 ug/L
		Xylenes	350 ug/L
		Gasoline	6 mg/L
		Diesel	1 mg/L

Quality Control Quality Assurance Summary: Water

Analyte	Method	Reporting limit	Blank	MS/MSD Recovery	RPD
MIBK	8020	0.5 ug/L	ND	AVG 100%	9
Benzene	8020	0.5 ug/L	ND		
Toluene	8020	0.5 ug/L	ND		
Ethylbenzene	8020	0.5 ug/L	ND		
Xylenes	8020	1 ug/L	ND		
Gasoline	8015/5030	50 ug/L	ND	AVG 92%	1
Diesel	8015 M	50 ug/L	ND	AVG 90%	1

ELAP CERTIFICATION NUMBER 1753

Reviewed and Approved by

John Murphy
 John Murphy
 Laboratory Director

CHAIN OF CUSTODY

REG RUSH

95-507

SAMPLERS: (Signature) <i>[Signature]</i>					ANALYSIS REQUESTED						
PROJECT NAME: (FIRM) <i>[Signature]</i>					JOB NUMBER: 5553						
DESCRIPTION: TANK REMOVAL					TOTAL PETROLEUM HYDROCARBONS BTEX VOC - EPA 8240 TOTAL OIL AND GREASE LEAD EPA - 8270 METALS SOILS M						
ADDRESS: MAKINER ST. DR.											
CROSS REFERENCE NUMBER	DATE	TIME	SOIL	WATER	SAMPLE LOCATION					REMARKS	
5553-4	10/6/95	11:55		X	WASTE IN EXCAVATION						+ REMOVED BY 1003

RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE: 10/6/95	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 10/6/95
RELINQUISHED BY: (Signature) <i>[Signature]</i>	TIME: 4:00 pm	RECEIVED BY: (Signature) <i>[Signature]</i>	TIME: 4:00 pm
RELINQUISHED BY: (Signature) <i>[Signature]</i>	DATE: 10/6/95	RECEIVED BY: (Signature) <i>[Signature]</i>	DATE: 10-6-95
RELINQUISHED BY: (Signature) <i>[Signature]</i>	TIME: 4:20 pm	RECEIVED BY: (Signature) <i>[Signature]</i>	TIME: 4:20 pm
RELINQUISHED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE
RELINQUISHED BY: (Signature)	TIME	RECEIVED BY: (Signature)	TIME
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RELINQUISHED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE
RELINQUISHED BY: (Signature)	TIME	RECEIVED BY: (Signature)	TIME

95 11:31 FROM: L&W ENVIRONMENTAL SVCS. ID: 4158225290

Table 1

SOIL SAMPLE ANALYTICAL RESULTS

Barnhill Construction
 2394 Mariner Square Drive.
 Alameda, CA

Sample I.D. #	Sample Date	Depth (feet)	TPHd (mg/kg)	TPHg (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)
GP-1@5'	1/30/97	5.0	ND<10	ND<100	ND<1.0	ND<2.0	ND<2.0	ND<4.0	ND<10
GP-2@4'	1/30/97	4.0	ND<10	ND<100	ND<1.0	ND<2.0	ND<2.0	ND<4.0	ND<10
GP-3@4'	1/30/97	4.0	ND<10	ND<100	ND<1.0	ND<2.0	ND<2.0	ND<4.0	ND<10

Notes:

- ID# : Ground water sample identification number.
- Date : Date ground water sample was collected.
- DTW : Depth to water.
- TPHd : Total petroleum hydrocarbons as diesel by EPA Method 3550, equivalent to the CA LUFT manual DHS method.
- TPHg : Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
- BTEX : Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020.
- MTBE : Methyl-tert-butylether by EPA Method 8020.
- mg/kg : Milograms per kilogram.
- ND : Not detected above the indicated laboratory method detection limit.

Table 2

GROUND WATER ELEVATIONS AND SAMPLE ANALYTICAL RESULTS

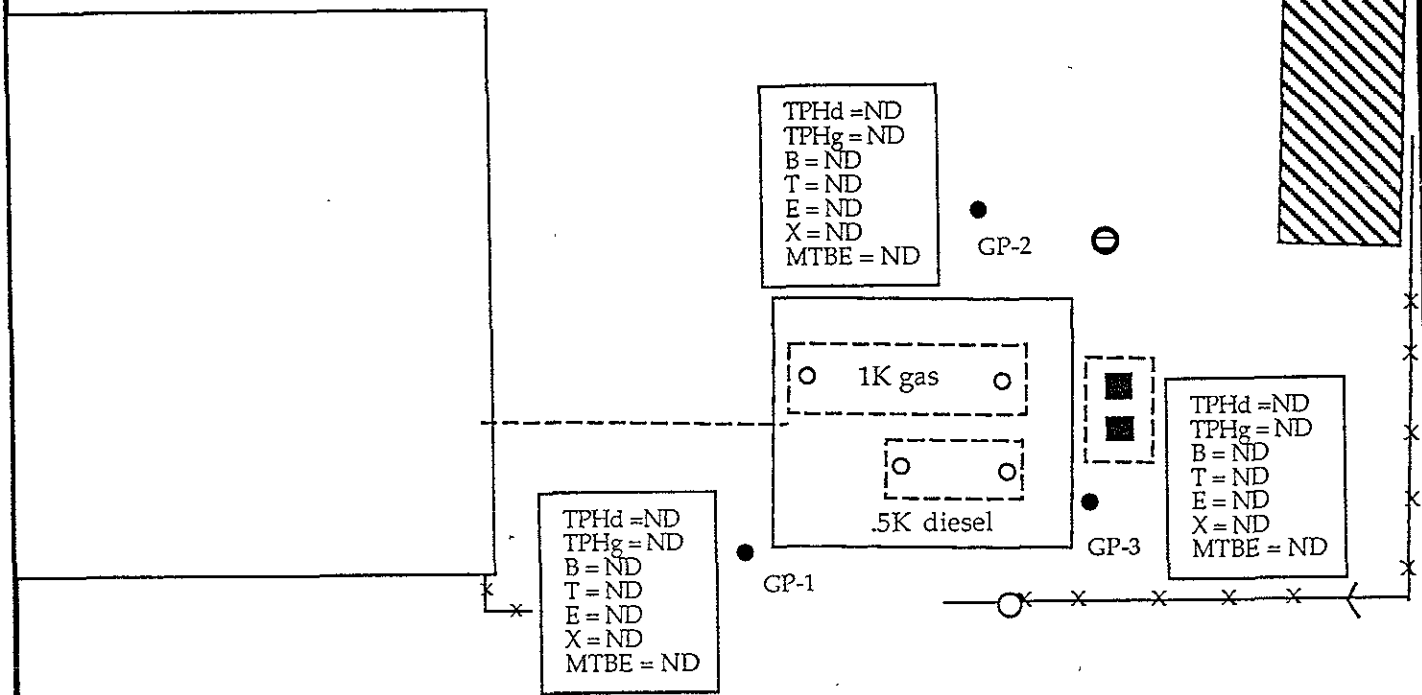
Barnhill Construction
2394 Mariner Square Drive
Alameda, CA

Sample I.D. #	Sample Date	DTW (feet)	TPHd (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
WS-1	1/30/97	4.2	130 (1)	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10
WS-2	1/30/97	4.2	150 (1)	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10
WS-3	1/30/97	4.1	180 (1)	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10
CA Primary MCL (2)			--	--	1	100 (7)	680	1,750	--

Notes:

- ID# : Ground water sample identification number.
Date : Date ground water sample was collected.
DTW : Depth to water.
TPHd : Total petroleum hydrocarbons as diesel by EPA Method 3510, equivalent to CA LUFT manual protocols.
TPHg : Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
BTEX : Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020.
MTBE : Methyl-tert-butylether by EPA Method 8020.
µg/L : Micrograms per Liter.
ND : Not detected above the indicated laboratory method detection limit.
(1) : Qualitative identification is uncertain. Therefore, all material in the C9 to C22 range was quantified against diesel fuel without respect to pattern. Chromatographic data indicates the presence of material which is heavier than diesel fuel in this sample.
(2) : Drinking Water Standards, California Department of Health Services, Primary Maximum Contaminant Level (MCL).

NORTH

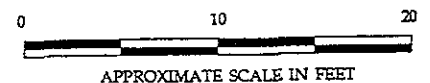


LEGEND

GP-1 ● Geoprobe Point.

TPHd = ND
TPHg = ND
B = ND
T = ND
E = ND
X = ND
MTBE = ND

Concentrations of: total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), benzene (B), toluene (T), ethylbenzene (E), total xylenes (X), and methyl-tert-butylether (MTBE) in soil samples collected from borehole - in mg/kg.



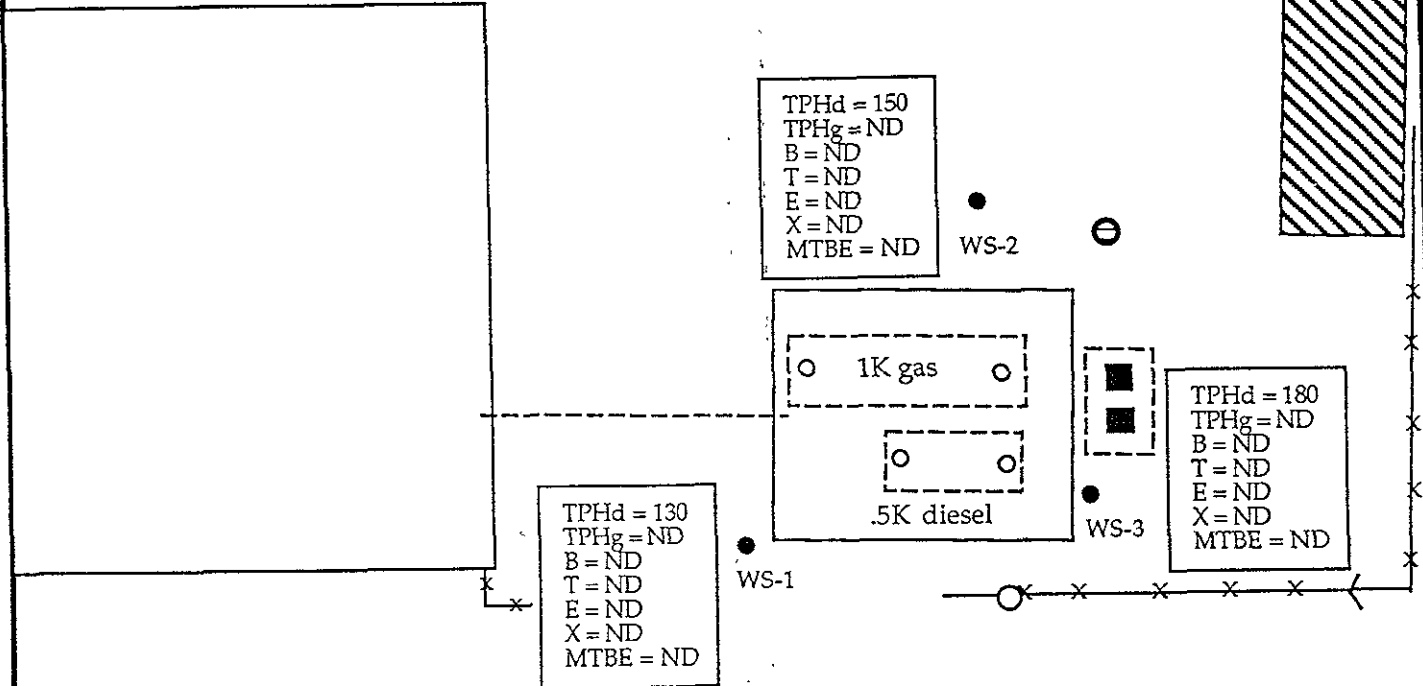
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PETROLEUM HYDROCARBON
CONCENTRATIONS IN SOIL
Barnhill Construction
2394 Mariner Square Drive
Alameda, California

Figure
3

7-309 2/97

NORTH

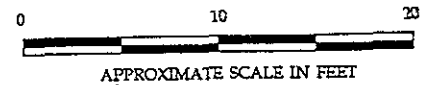


LEGEND

WS-1 ● Water sample designation from geoprobe point.

TPHd = 130
TPHg = ND
B = ND
T = ND
E = ND
X = ND
MTBE = ND

Concentrations of: total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), benzene (B), toluene (T), ethylbenzene (E), total xylenes (X), and methyl-tert-butylether (MTBE) dissolved in water samples collected from temporary well - in $\mu\text{g/L}$.




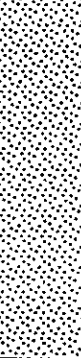

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**PETROLEUM HYDROCARBON
CONCENTRATIONS IN
GROUND WATER**
Barnhill Construction
2394 Mariner Square Drive
Alameda, California

Figure
4

7-309 2/97

SITE/LOCATION Barnhill, Alameda		BEGUN 1/30/97	BORING DIAMETER 4 Inches	ANGLE/BEARING 90°	BORING NO GP-1
DRILLING CONTRACTOR Gregg Drilling		COMPLETED 1/30/97	FIRST ENCOUNTERED WATER DEPTH 4.2 feet		BOTTOM OF BORING 10 feet
DRILL MAKE & MODEL Geoprobe	OPERATOR P. Rogers	LOGGED BY F. Maroni	STATIC WATER DEPTH/DATE 4.2 feet		WELL NO. N/A
WELL MATERIAL N/A	SLOT SIZE N/A	SAMPLING METHOD Geoprobe with 2 ft Teflon Tubes			BOTTOM OF WELL N/A
FILTER PACK N/A	WELL SEAL 5% Bentonite grout			PLANNED USE Exploration	

BLOWS/ FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
	ATM: 0.5	1					SAND (SW); Light Brown, well graded, medium to fine grained, loose density, angular to subrounded, moist to wet.
		2					
		3					SAND (SW); Grey, well graded, fine grained, loose, subangular to subrounded, trace silt, wet.
	0.0	4					
		5					
		6					
		7					
		8					
		9					
		10					
		11					BOTTOM OF BORING = 10 FEET BGS.
		12					
		13					
		14					
		15					

HYDR  - ENVIR  NMENTAL TECHN  OLOGIES, INC.	SOIL BORING LOG GP-1 Barnhill Construction 2394 Mariner Square Drive Alameda, CA	PLATE B-2 SHEET 1 OF 1
	DATE: 2/17/97 APPROVED BY: Gary Pischke, C.E.G.	JOB NO. 7-309

SITE/LOCATION Barnhill, Alameda		BEGUN 1/30/97	BORING DIAMETER 4 Inches	ANGLE/BEARING 90°	BORING NO GP-2
DRILLING CONTRACTOR Gregg Drilling		COMPLETED 1/30/97	FIRST ENCOUNTERED WATER DEPTH 4.2 feet		BOTTOM OF BORING 10 feet
DRILL MAKE & MODEL Geoprobe	OPERATOR P. Rogers	LOGGED BY F. Maroni	STATIC WATER DEPTH/DATE 4.2 feet		WELL NO. N/A
WELL MATERIAL N/A	SLOT SIZE N/A	SAMPLING METHOD Geoprobe with 2 ft Teflon tube			BOTTOM OF WELL N/A
FILTER PACK N/A	WELL SEAL 5% Bentonite grout				PLANNED USE Exploration

BLOWS/ FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
	ATM: 0.5	1					
		2					
		3					
0.5		4					SAND (SW); Light Brown, well graded, medium to fine grained, medium to loose dense, subangular to subrounded, moist to wet.
		5					
		6					SAND (SW); Grey, well graded, fine grained, subangular to subrounded, wet.
		7					
		8					
		9					
		10					
		11					BOTTOM OF BORING = 10 FEET BGS.
		12					
		13					
		14					
		15					

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SOIL BORING LOG
GP-2

Barnhill Construction
2394 Mariner Square Drive
Alameda, CA

PLATE
B-3

SHEET 1 OF 1

DATE: 2/17/97
APPROVED BY: Gary Pischke, C.E.G.

JOB NO.
7-309

SITE/LOCATION Barnhill, Alameda		BEGUN 1/30/97	BORING DIAMETER 4 Inches	ANGLE/BEARING 90°	BORING NO GP-3
DRILLING CONTRACTOR Gregg Drilling		COMPLETED 1/30/97	FIRST ENCOUNTERED WATER DEPTH 4.1 feet		BOTTOM OF BORING 10 feet
DRILL MAKE & MODEL Geoprobe	OPERATOR P. Rogers	LOGGED BY F. Maroni	STATIC WATER DEPTH/DATE 4.1 feet		WELL NO. N/A
WELL MATERIAL N/A	SLOT SIZE N/A	SAMPLING METHOD Geoprobe with 2 ft Teflon tubes			BOTTOM OF WELL N/A
FILTER PACK N/A	WELL SEAL 5% Bentonite grout				PLANNED USE Exploration

BLOWS/ FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
	ATM: 0.5	1					<p>SAND (SW); Light Brown, well graded, medium to fine grained, medium to loose dense, subangular to subrounded, moist to wet.</p> <p>As above; Grey mottling noted.</p>
		2					
		3					
0.5		4		▼▼			
		5					
		6					
		7					
		8					
		9					
		10					
		11					<p>BOTTOM OF BORING = 10 FEET BGS.</p>
		12					
		13					
		14					
		15					

**HYDR -
ENVIR NMENTAL
TECHN A LOGIES, INC.**

DATE: 2/17/97

APPROVED BY: Gary Pischke, C.E.G.

SOIL BORING LOG
GP-3

Barnhill Construction
2394 Mariner Square Drive
Alameda, CA

PLATE
B-4

SHEET 1 OF 1

JOB NO.
7-309