

April 20, 2000

00 APR 24 PM 6:25

Ms. eva chu  
Alameda County Health Care Services Agency  
Environmental Protection  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577

16,000 ppb MTBE in GW probably from former  
fuel dispenser. Recommend MW  
by former Boring, another further down  
and a third SW of former ST

Re: Report of Preliminary Site Assessment, L&D Scaffold, Inc., 1420 162<sup>nd</sup> Avenue, San Leandro, CA

ALLCAL Environmental (ALLCAL) is pleased to submit this report of a preliminary site assessment on behalf of Mr. Don Puckett and Ms. Betty Puckett (Client) of L&D Scaffold, Inc. This report documents the results of a soil and groundwater investigation at the above referenced site (see attached Figure 1). The investigation consisted of drilling two soil borings (SB-1 and SB-2) in the vicinity of a removed, underground, gasoline storage tank (UST) and collecting and analyzing soil and groundwater samples. This preliminary site assessment was conducted under a March 7, 2000, work plan approved by the Alameda County Health Care Services Agency (ACHCSA) in a March 13, 2000, letter (attached).

The site is occupied by one two-story building used for office and shop space and a second single-story building used for warehousing of scaffolding. The site is bounded on the southwest by an appliance parts distributor, on the northeast and southeast by apartment complexes and residential property, and on the northwest by 162<sup>nd</sup> Avenue.

The site is currently used to operate a business that rents and erects scaffolding.

## HYDROGEOLOGIC SETTING

The following discussion of regional hydrogeology is taken in part from GEOHYDROLOGY AND GROUNDWATER-QUALITY OVERVIEW, EAST BAY PLAIN AREA, ALAMEDA COUNTY, CALIFORNIA, 205 (j) Report, Kelvin Hickenbottom and Kenneth Muir, June 1988, and HYDROGEOLOGY OF CENTRAL SAN LEANDRO, Woodward-Clyde Consultants, December, 1993.

### Regional Hydrogeology

The site is located in the East Bay Plain of the Coast Ranges physiographic province. The East Bay Plain is an area of flat alluvial lowlands and bay and tidal marshes lying between the bedrock hills of the Diablo Range to the east and San Francisco Bay to the west. Near the site area, the eastern boundary of the plain is located along the Hayward fault which is at the base of the Diablo Range escarpment, about 2,000 feet to the northeast.

The East Bay Plain and San Francisco Bay are the result of a structural downwarp that received sediments for much of Pleistocene time, a period that extends from about 2 million years ago until about 10,000 years ago. The degree of downwarping has varied considerably across the two areas. Consequently, some local areas have a thin sedimentary fill and others have relatively thick sedimentary fills. In San Leandro, significant downwarping has occurred and sedimentary fill may exceed a 1,000 feet in thickness in some areas.

Beneath the sediments are consolidated bedrock whose upper surface is the floor of the structural downwarp. The bedrock is Jurassic, Cretaceous, and Tertiary in age and consists of sandstone, conglomerate, shale, chert, and serpentine with some volcanic rocks. This bedrock also comprises the hills (East Bay Hills) east of the Hayward fault that are part of the Diablo Range.

Sedimentary fill in the San Leandro area was mostly derived from the East Bay Hills. Toward the bay, some fill consists of estuarine and marine deposits. Based on well driller's logs, the sedimentary fill has been divided into "older alluvium" and "younger alluvium." "Younger alluvium" in this report includes the Merritt Sand, bay mud, interfluvial basin deposits, and fluvial deposits.

In general, the "older alluvium" is present beneath all of the East Bay Plain and extends under San Francisco Bay. The "older alluvium" is Pleistocene in age and consists of clay, silt, sand, and gravel that was deposited as alluvial fans extending from the East Bay Hills. This sediment is a major groundwater reservoir in the East Bay Plain and may locally reach a thickness of about 1,000 feet. Wells in the "older alluvium" produce sufficient amounts of groundwater for irrigation, industrial, and municipal use.

The "younger alluvium" overlies the "older alluvium" and, with the exception of the Merritt Sand, is still being deposited. These sediments are Pleistocene, Holocene, and Recent in age and have been deposited as beach and near-shore sediments, peat beds, bay and estuarine deposits, and fluvial and flood plain deposits. They may locally reach a thickness of about 150 feet. These sediments are a minor source of groundwater, mostly sufficient for domestic use (lawn and garden irrigation and other non-potable uses) because much of the permeable "younger alluvium" lies above the zone of saturation.

Groundwater flow in aquifers of both the "older and younger alluvium" is generally westerly toward San Francisco Bay; the gradient may vary locally.

### **Site Geology and Hydrogeology**

The site is located in Township 3 South, Range 2 West, Section 6 of the Hayward, California 7.5-Minute Series, Topographic Quadrangle Map (Figure 1) at an elevation of about 35 feet above mean sea level (MSL). Surface sediments are "younger alluvium" and Holocene in age. Regional topographic gradient is southwesterly; however, at the site the local gradient is northwesterly with a slope of about .0056 feet per foot. San Lorenzo Creek is about 4,500 feet south of the site, San

Francisco Bay, the nearest topographically down-gradient surface water, is about 17,000 feet southwest of the site, and Lake Chabot is about 8,000 feet north-northeast of the site. No other significant bodies of nearby surface water are known.

Groundwater was encountered during UST removal activities at a depth of about 8 feet. During this investigation, groundwater was encountered in boring SB-2 at a depth of 12 feet. Direction of groundwater flow has not been determined at the site, however, based on topographic gradient and information provided by the ACHCSA on direction of groundwater flow at nearby sites, direction of groundwater flow is estimated to be northwesterly.

## **BACKGROUND**

The following discussion is summarized from information provided by the Client and from a November 3, 1999, UST REMOVAL REPORT, L&D SCAFFOLD, INC., 1420 162<sup>ND</sup> AVENUE, SAN LEANDRO, CA, prepared by Environmental Bio-Systems, Inc. (EBS).

### **Site Ownership and UST History**

Don and Betty Puckett have owned the subject property since about 1980. Prior to their ownership, Mr. and Ms. Puckett rented the property for about 25 years. During their occupancy, the property has been used as a business that rents and erects scaffolding. The property is used for storing scaffolding.

A 7,500-gallon UST was installed in about 1979 to service company vehicles. The UST was used until Spring 1999.

### **UST Closure**

On October 25, 1999, a 7,500-gallon, gasoline, single-walled steel UST; appurtenant piping; and dispenser were removed by EBS. The UST and dispenser were located outside the southwestern corner of the site's two-story building (Figure 2). Examination of the UST, after its removal, revealed the tank was in excellent condition with no rust or corrosion visible on the outer surface. The tank had an intact tar wrapping.

During removal of the piping, mild hydrocarbon odor was detected directly beneath a joint located between the dispenser and the UST.

Soil samples were collected for chemical analyses from the northerly sidewall and southwestern corner of the excavation immediately above groundwater; at depth of about 7 feet below grade. A soil sample was also collected for analysis from beneath the apparent leaky pipe joint discussed above; at a depth of about 1.5 feet below grade. The soil sample collected from the northerly sidewall detected only total petroleum hydrocarbons as gasoline (TPHG), methyl tert-butyl ether (MTBE), and total lead [at concentrations of 2.5 parts per million (ppm), 2.5 ppm, and 10 ppm,

respectively]. The soil sample collected from the southwesterly corner detected only MTBE and total lead (at a concentration of 0.037 ppm and 9.1 ppm, respectively). The soil sample collected from beneath the piping detected only TPHG, benzene, MTBE, and total lead (at concentrations of 28 ppm, 2.2 ppm, 28 ppm, and 11 ppm, respectively). The laboratory noted the TPHG concentration in the above samples included the MTBE concentration.

During tank removal activities, water was encountered in the excavation at a depth of about 8 feet. The water was sampled twice for chemical analyses, once prior to UST removal on October 25, 1999, and once after the tank was removed and the excavation was dewatered for backfilling on October 26, 1999. For the second sampling event, only TPHG, toluene, xylenes, and MTBE were detected [at concentrations of 1,300 parts per billion (ppb), 2.1 ppb, 1.6 ppb, and 1,300 ppb, respectively]. The laboratory noted the TPHG concentration included the MTBE concentration.

Because of the concentrations of TPHG and MTBE detected in the above soil and groundwater samples, the ACHCSA has requested a PSA to delineate the extent of soil and groundwater contamination at the site.

### **PRELIMINARY SITE ASSESSMENT**

As a further investigation of gasoline contamination of the vadose (unsaturated) zone soil and groundwater, ALLCAL supervised the drilling of two soil borings for the collection and analysis of soil and "grab" groundwater samples.

The following work was conducted:

- Submitted a March 7, 2000, work plan to the Client and ACHCSA for their comment and approval.
- Obtained a soil boring permit from the Alameda County Public Works Agency (ACPWA) and notified Underground Service Alert (USA).
- Drilled an exploratory soil boring (SB-1) to a depth of 10.5 feet at the location of the former dispenser. Drilled a second exploratory soil boring (SB-2) to a depth of 14 feet at a location about 15 feet from the excavation of the former UST, in the estimated downgradient direction of groundwater flow.
- Continuously logged the soil profile of each boring. From the boring at the location of the former dispenser, collected unsaturated soil samples at the depths of 3, 5, and 10 feet for chemical analysis. From the downgradient boring, collected an unsaturated soil sample at a depth of 11.5 feet and a "grab" groundwater sample for chemical analysis.
- Analyzed all soil and groundwater samples for TPHG; benzene, toluene,

ethylbenzene, and xylenes (BTEX); and MTBE.

- Sealed each boring to ground surface with neat Portland cement slurry.
- Prepared this report.

Details of the above work are presented below.

### **Pre-drilling Activities**

Prior to drilling soil borings, ALLCAL: (1) obtained approval of a March 7, 2000, work plan from the Client and the ACHCSA (see attached March 13, 2000, letter), (2) obtained a soil boring permit from the ACPWA, (3) visited the site to mark the locations of the soil borings and notified USA, (4) subcontracted Fast-Tek Engineering Support Services of Point Richmond, California (C57 license No. 589008) to drill the soil borings, and (5) gave 48-hours' notice to the ACHCSA prior to drilling the borings.

### **Rationale for Boring Locations**

Soil boring SB-1 was drilled at the location of the former dispenser to further evaluate an apparent leaky pipe joint observed at the time of the UST removal and to evaluate potential leakage of the dispenser.

Soil boring SB-2 was drilled about 15 feet in the estimated downgradient direction (northwesterly) of groundwater flow from the former UST excavation to further evaluate the extent of groundwater contamination detected at the time of UST removal. Also, this boring is located in an area to further evaluate the extent of soil contamination that may have originated from the former piping and dispenser.

### **Soil Boring and Sampling Procedures**

The following discusses soil boring and soil and groundwater sampling procedures.

The borings were drilled with the Geoprobe System, small diameter (about 2-inch) drill casing, direct-push technology. Soil samples were continuously collected as core into polyethylene terephthalate glycol (PETG) liners in 4-foot depth intervals or less. The PETG liner was contained within the 2-inch drill casing. The drill casing and enclosed PETG liner were hydraulically driven by drill rods in 4-foot depth intervals to the total depth of each boring (the last driven interval was less than 4 feet in each boring). After driving the 4-foot interval, the drill casing and enclosed liner were retrieved and the soil core was examined for contamination and construction of lithologic logs.

Three unsaturated soil samples were collected from boring SB-1, and one unsaturated soil sample from boring SB-2 for preservation for chemical analysis. Soil samples were collected at the depths

of 3, 5, and 10 feet in boring SB-1, and at the depth of 10.5 feet in boring SB-2. Samples were collected by cutting and preserving a 6-inch interval of the PETG liner. To minimize the potential for cross-contamination, the drill casing shoe was cleaned with Alconox detergent and rinsed with distilled water between sampling events and prior to beginning each boring.

Groundwater was encountered in boring SB-2 at a depth of about 12 feet and stabilized at a depth of about 8 feet. A "grab" groundwater sample was collected by installing 1-inch diameter, polyvinyl chloride (PVC), .010-inch slotted casing into the boring, allowing water to enter the casing, and lowering a .75-inch PVC dedicated bailer into the water column. The water sample was decanted from the bailer into laboratory provided 40-milliliter vials preserved with HCL.

After all soil and groundwater samples were collected, each boring was sealed to grade with neat Portland Type II cement.

The soil from each boring was logged according to the Unified Soil Classification System by a California Registered Geologist (see attached EXPLORATORY BORING LOGS).

Drill cuttings are stored on site in a labeled 5-gallon pail. The label shows contents, date stored, suspected contaminant, expected date of removal, company name, contact person, and telephone number.

### **Sample Handling Methods**

Soil samples selected for chemical analysis were preserved in PETG liners with no headspace by quickly covering the open ends with Teflon sheeting and capping them with plastic end-caps. The samples were labeled to show site name, project number, date, time, sample name, depth collected, and sampler name; sealed in quart-size plastic bags; and stored in an iced-cooler.

The "grab" groundwater sample was stored in laboratory provided, 40-milliliter, HCL-preserved VOAs having Teflon-lined plastic caps. The sample was labeled and stored as above.

### **Soil Profile**

The soil profile observed in both borings consisted mostly of clay. The clay was dark brown to black from grade to a depth of 3 to 4 feet. The remainder of the soil profile varied in color from grey to brown. Silt and or sand layers, up to a foot thick, were present at the depths of about 5 and 10 feet.

Groundwater was encountered in boring SB-2 at a depth of about 12 feet. An attempt was made to collect a soil sample from 12 to 14 feet deep to identify the lithology of the aquifer, however, the sampler had no recovery (see attached EXPLORATORY BORING LOGS).

## Results of Chemical Analyses

Four soil samples and one groundwater sample were delivered under chain-of-custody to California Department of Health Services certified McCampbell Analytical Inc. laboratory in Pacheco, California. All samples were analyzed for TPHG, BTEX, and MTBE by EPA Methods GCFID, 5030/8015, 8020, and 8020, respectively. MTBE was verified by EPA Method 8260 in the soil sample collected at the depth of 3 feet in boring SB-1 (because this soil sample had the highest concentration of MTBE by EPA Method 8020) and the groundwater sample collected from boring SB-2.

### *Soil Sample Analytical Results*

TPHG and BTEX chemicals were detected only in boring SB-1 [sample (SB1-3.0-3.5)], collected at the depth of 3 feet. TPHG, benzene, toluene, and xylenes were detected at concentrations of 1.0 part per million (ppm), 0.017 ppm, 0.005 ppm, and 0.12 ppm, respectively. No ethylbenzene was detected. The laboratory noted that the TPHG chromatogram suggested unmodified or weakly modified gasoline is significant.

MTBE was detected in all four soil samples. MTBE was detected in boring SB-1 at the depths of 3, 5, and 10 feet at concentrations of 17 ppm, 0.70 ppm, and 1.2 ppm, respectively. MTBE was detected in boring SB-2 at the depth of 11.5 feet at a concentration of 0.35 ppm.

MTBE was verified by EPA Method 8260 in soil sample SB1-3.0-3.5 collected from boring SB-1 at the depth of 3 feet. This sample was selected for verification because it had detected the highest concentration of MTBE by EPA Method 8020. MTBE was confirmed at a concentration of 2.8 ppm.

### *Groundwater Sample Analytical Results*

Only MTBE and xylenes were detected in groundwater sample SB2-W collected from boring SB-2. MTBE and xylenes were detected at concentrations of 16,000 parts per billion (ppb) and 6.1 ppb, respectively. TPHG was nondetectable at the elevated Reporting Limit of 500 ppb. MTBE was verified by EPA Method 8260 at a concentration of 18,000 ppb.

The reader is referred to the attached certified analytical report and chain-of-custody for detailed analytical results and quality control documentation.

Please call me if you have any questions,

Sincerely,



John V. Mrakovich, Ph.D., R.G.



StID 6645

March 13, 2000

Mr. Don Puckett  
P.O.Box 7237  
Clear Lake, CA 95422

Ms. Betty Puckett  
L&D Scaffold  
1420 162<sup>nd</sup> Avenue  
San Leandro, CA 94578

**RE: Work Plan for 1420 162<sup>nd</sup> Avenue, San Leandro, CA**

Dear Mr. and Ms. Puckett:

I have completed review of AllCal Environmental's March 2000 *Proposed Work Plan for Preliminary Site Assessment* prepared for the above referenced site. The proposal to advance two boreholes (one at the former dispenser and the other about 15 feet from the former tank excavation, in the estimated downgradient direction of groundwater flow) to delineate the extent of soil and groundwater contamination at the site is acceptable.

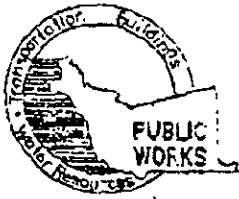
Field work should commence within 60 days of the date of this letter, **or by May 15, 2000**. Please provide 72 hours notice this office prior to the start of field activities. If you have any questions, I can be reached at (510) 567-6762.

eva chu  
Hazardous Materials Specialist

email: John Mrakovich ([mrakovich@worldnet.att.net](mailto:mrakovich@worldnet.att.net))



FROM : ALLCAL PHONE NO. : 5185818493 Mar. 15 2000 12:33PM P1



### ALAMEDA COUNTY PUBLIC WORKS AGENCY

**WATER RESOURCES SECTION**  
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651  
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262  
(510) 670-5248 ALVIN KAN

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT LED SCAFFOLD, INC  
1720 WOODLAND AVENUE  
SAN LEANDRO, CA 94578

PERMIT NUMBER W00-116  
WELL NUMBER \_\_\_\_\_  
APN \_\_\_\_\_

California Coordinates Source \_\_\_\_\_ ft. Accuracy ± \_\_\_\_\_ ft.  
CCN \_\_\_\_\_ N CCE \_\_\_\_\_ ft.  
APN \_\_\_\_\_

### PERMIT CONDITIONS

Circled Permit Requirements Apply

CLIENT  
Name BETTY PUCKETT  
Address AS ABOVE Phone 510 276 424  
City \_\_\_\_\_ Zip \_\_\_\_\_

#### (A) GENERAL

1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Well Completion Report.

APPLICANT  
Name JOHN MRAKOVICH  
RUCAL ENVIRONMENTAL Fax 510 581 8490  
Address 2775 HIGHWAY 30 Phone 510 581 2300  
City HAYWARD, CA Zip 94547

3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT

Well Construction	<input type="checkbox"/>	Geotechnical Investigation	<input type="checkbox"/>
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input checked="" type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input type="checkbox"/>

#### B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other _____	<input type="checkbox"/>

#### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>	<u>GEOPROBE</u>	

#### (D) GEOTECHNICAL

Backfill bore hole with cement grout or cement grout/sand mixture by tremie and upper 2 feet with compacted material

DRILLER'S LICENSE NO. C57 539008

#### E. CATHODIC

Fill hole above anode zone with concrete placed by tremie.

WELL PROJECTS

Drill Hole Diameter	_____ in.	Maximum	_____
Casing Diameter	_____ in.	Depth	_____ ft.
Surface Seal Depth	_____ ft.	Number	_____

#### F. WELL DESTRUCTION

See attached.

GEOTECHNICAL PROJECTS

Number of Borings	<u>2</u>	Maximum	_____
Hole Diameter	<u>2</u> in.	Depth	<u>15</u> ft.

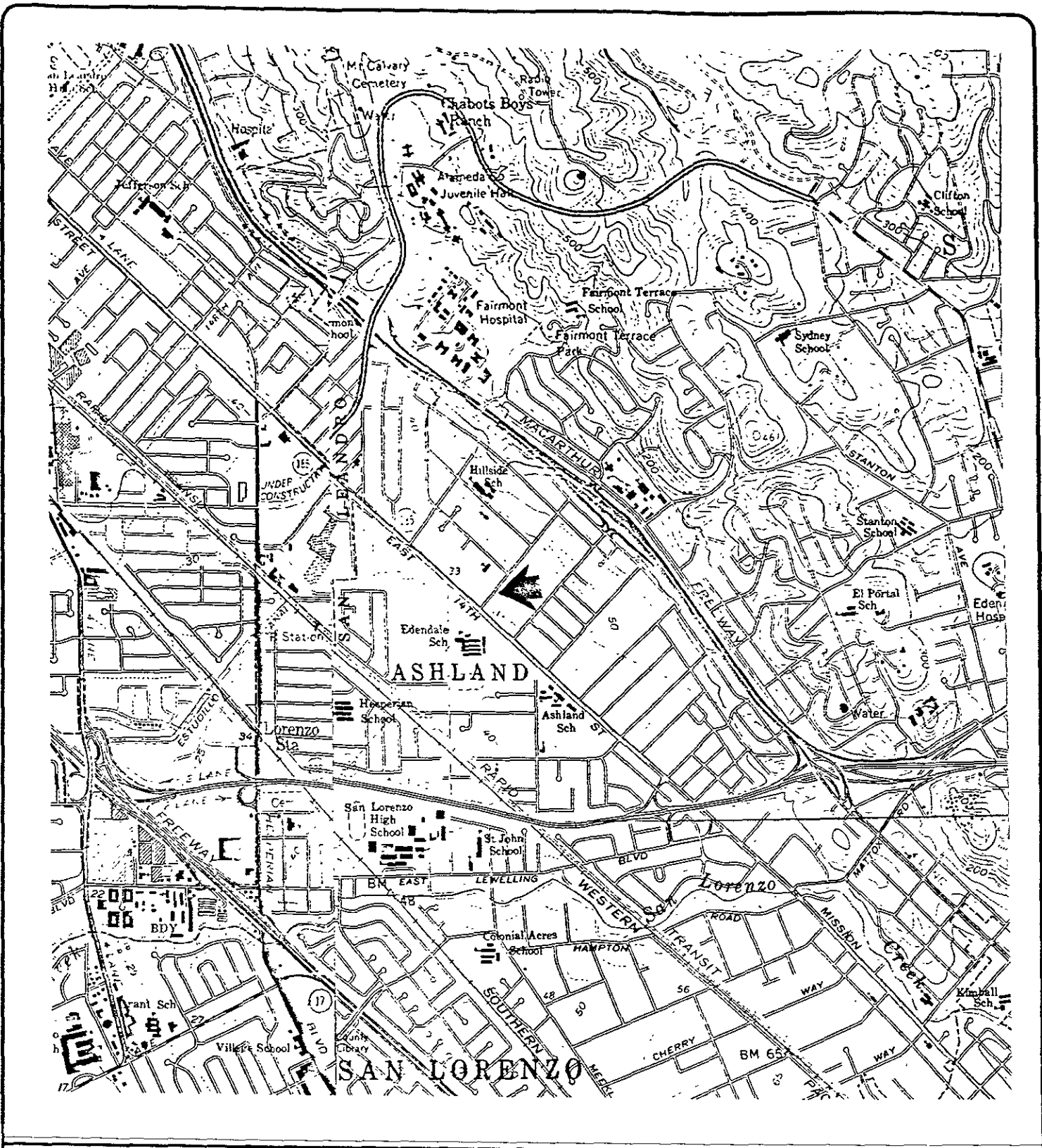
#### G. SPECIAL CONDITIONS

ESTIMATED STARTING DATE 3/28/00  
ESTIMATED COMPLETION DATE 3/29/00

APPROVED Frank L. Code DATE 3-15-00

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68

AFFILIANT'S SIGNATURE J. Michael DATE 3/15/00



**Legend**

USGS 7.5 Minute Series Topographic  
 Map Hayward, California 1959,  
 Photo revised 1989

0 2000

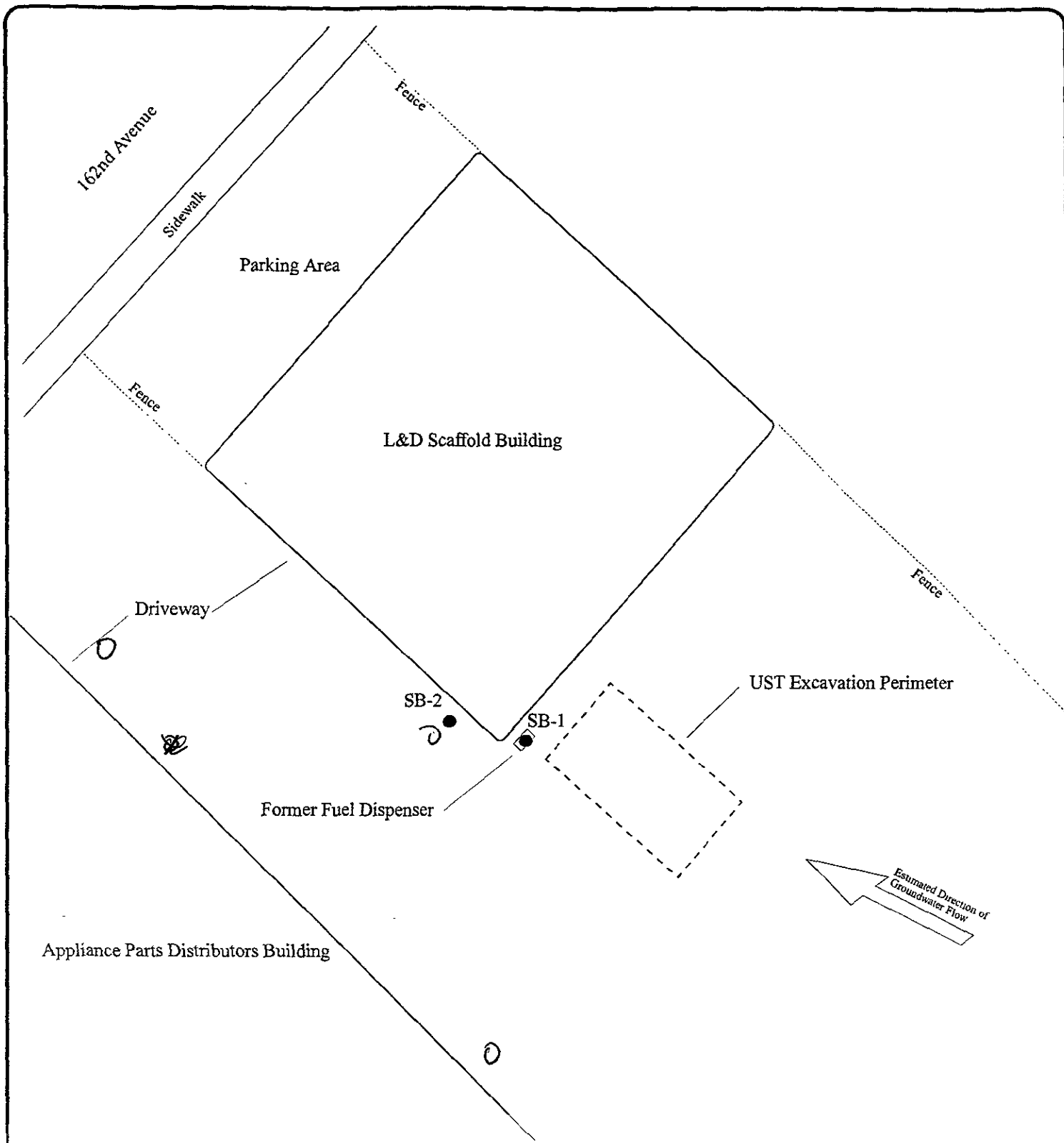
Approximate Scale (ft.)




**ALLCAL ENVIRONMENTAL**

**FIGURE 1  
 SITE LOCATION MAP**


L&D SCAFFOLD, INC  
 1420 162nd AVENUE  
 SAN LEANDRO, CA 94578



**Legend**

SB-1  
 Name and Location of Soil Boring

0 ————— 20  
 Approximate Scale (ft)

N 

**ALLCAL ENVIRONMENTAL**

**FIGURE 2**  
**SITE PLAN**  
 L&D SCAFFOLD, INC  
 1420 162nd AVENUE  
 SAN LEANDRO, CA 94578

# EXPLORATORY BORING LOG

Project Number: 147

Boring Number: SB-1

Project Name: L&D Scaffold, Inc.  
1420 162nd Avenue  
San Leandro, CA

Page Number: 1 of 1

By: ALLCAL ENVIRONMENTAL

Date: 3/28/00

Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND- WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
						CL	0 - .5 FT.: AGGREGATE BASE MATERIAL
36/48						CL	.5 - 1.0 FT.: CLAY (CL), BROWN, SILTY, FIRM, DAMP, NO ODOR.
						CL	1.0 - 3.5 FT.: CLAY (CL), BLACK, SILTY, SOFT TO FIRM, DAMP, NO ODOR.
				5		CL	3.5 - 4.5 FT.: CLAY (CL), GREY, VERY SILTY, SOFT, DAMP, NO ODOR
48/48						ML	4.5 - 6.0 FT.: SILT (ML), GREY, VERY CLAYEY, DAMP TO WET, NO ODOR.
						CL	6.0 - 6.5 FT.: CLAY (CL), GREY, SILTY, SOFT TO FIRM, DAMP, NO ODOR.
						CL	6.5 - 9.0 FT.: CLAY (CL), BROWN, SILTY, FIRM, DAMP, NO ODOR.
30/30				10		CL	9.0 - 10.0 FT.: CLAY (CL), GREY, SILTY, HARD, MOIST TO WET, NO ODOR
						ML	10.0 - 10.5 FT.: SILT (ML), MOTTLED GREY AND BROWN, VERY CLAYEY, DAMP, NO ODOR.
							CONTINUOUSLY CORED TO 10.5 FT.
				15			

Remarks: BORING CONTINUOUSLY CORED WITH 2 0 - INCH O. D. DIRECT-PUSH, GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1 75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH PORTLAND TYPE II CEMENT SLURRY

# EXPLORATORY BORING LOG

Project Number: 147

Boring Number: SB-2

Project Name: L&D Scaffold, Inc.  
1420 162nd Avenue  
San Leandro, CA

Page Number: 1 of 1

By: ALLCAL ENVIRONMENTAL

Date: 3/28/00

Surface Elevation: NA

RECOVERY (in/in.)	VAPORS (ppm)	PENETRATION (blows/ft.)	GROUND- WATER LEVEL	DEPTH (ft.)	SAMPLES ANALYZED	SOIL TYPE	DESCRIPTION
							0 - .17 FT.: ASPHALT
48/48						CL	.17 - 4.0 FT.: CLAY (CL), BLACK, SILTY, FIRM, ROOTLETS, DAMP, NO ODOR.
				5		CL	4.0 - 5.5 FT.: CLAY (CL), GREY, VERY SILTY, FIRM, DAMP, NO ODOR.
48/48						SP CL SP	5.5 - 5.8 FT.: SAND (SP), GREY, FINE TO MEDIUM-GRAINED, SILTY, DAMP, NO ODOR.
						CL	5.8 - 6.2 FT.: CLAY (CL), GREY, VERY SILTY, FIRM, DAMP, NO ODOR.
							6.2 - 6.8 FT.: SAND (SP), GREY, CLAYEY, FINE-GRAINED, DAMP, NO ODOR.
48/48				10		ML	6.8 - 9.0 FT.: CLAY (CL), MOTTLED BROWN AND GREY, SILTY, FIRM, DAMP, NO ODOR.
						SP	9.0 - 10.0 FT.: SILT (ML), BROWN, VERY CLAYEY, DAMP, NO ODOR.
						CL	10.0 - 11.0 FT.: SAND (SP), BROWN, FINE TO MEDIUM-GRAINED, CLAYEY, MOIST, NO ODOR.
0/24						?	11.0 - 12.0 FT.: CLAY (CL), DARK BROWN TO BLACK, SILTY, FIRM, SATURATED @ 12 FT., NO ODOR.
				15			12.0 - 14.0 FT.: NO RECOVERY.
							CONTINUOUSLY CORED TO 14 FT.

Remarks: BORING CONTINUOUSLY CORED WITH 2 0 - INCH O. D., DIRECT-PUSH GEOPROBE SYSTEM. SAMPLES COLLECTED IN 1 75- BY 48 - INCH PETG LINER. BORING SEALED TO GROUND SURFACE WITH PORTLAND TYPE II CEMENT SLURRY



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

ALLCAL Environmental 27973 High Country Drive Hayward, CA 94542-2530	Client Project ID: #147; L&D Scaffold	Date Sampled: 03/28/00
		Date Received: 03/28/00
	Client Contact: John Mrakovich	Date Extracted: 03/28-04/10/00
	Client P.O:	Date Analyzed: 03/28-04/11/00

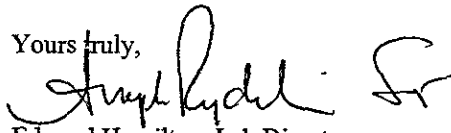
04/14/00

Dear John:

Enclosed are:

- 1). the results of 5 samples from your #147; L&D Scaffold project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,  
  
Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
http://www.mccampbell.com E-mail: main@mccampbell.com

ALLCAL Environmental 27973 High Country Drive Hayward, CA 94542-2530	Client Project ID: #147; L&D Scaffold	Date Sampled: 03/28/00
		Date Received: 03/28/00
	Client Contact: John Mrakovich	Date Extracted: 03/28-04/03/00
	Client P.O:	Date Analyzed: 03/28-04/03/00

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with Methyl tert-Butyl Ether\* & BTEX\***  
EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
34134	SB1-3.0-3.5	S	1.0,a	17	0.017	0.005	ND	0.12	107
34135	SB1-5.0-5.5	S	ND	0.70	ND	ND	ND	ND	99
34136	SB1-10.0-10.5	S	ND	1.2	ND	ND	ND	ND	101
34137	SB2-11.5-12.0	S	ND	0.35	ND	ND	ND	ND	105
34138	SB2-W	W	ND<500	16,000	ND	ND	ND	6.1	88
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

\* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

\* cluttered chromatogram, sample peak coelutes with surrogate peak

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant (biologically altered gasoline?); e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol % sediment; j) no recognizable pattern



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ALLCAL Environmental 27973 High Country Drive Hayward, CA 94542-2530	Client Project ID: #147; L&D Scaffold	Date Sampled: 03/28/00
		Date Received: 03/28/00
	Client Contact: John Mrakovich	Date Extracted: 04/05-04/10/00
	Client P.O:	Date Analyzed: 04/05-04/10/00

Methyl tert-Butyl Ether \*

EPA method 8260 modified

Lab ID	Client ID	Matrix	MTBE*	% Recovery Surrogate
34138	SB2-W	W	18,000	119
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	1.0 ug/L		
	S	5.0 ug/kg		

\* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L  
h) lighter than water immiscible sheen is present, i) liquid sample that contains greater than ~5 vol % sediment, j) sample diluted due to high organic content





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	Client Contact: John Mrakovich	Date Extracted: 04/10/00
	Client P.O:	Date Analyzed: 04/10/00

**Methyl tert-Butyl Ether \***

EPA method 8260 modified

Lab ID	Client ID	Matrix	MTBE*	% Recovery Surrogate
34134	SB1-3.0-3.5	S	2800	112
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	1.0 ug/L		
	S	5.0 ug/kg		

\* water samples are reported in ug/L. soil and sludge samples in ug/kg. wipe samples in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L  
 h) lighter than water immiscible sheen is present i) liquid sample that contains greater than ~5 vol % sediment. j) sample diluted due to high organic content

*Edward Hamilton* Edward Hamilton, Lab Director



### QC REPORT

Date: 03/28/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 32600

Instrument: GC-3

Surrogate1	0.000	103.0	103.0	100.00	103	103	0.0
Xylenes	0.000	295.0	297.0	300.00	98	99	0.7
Ethyl Benzene	0.000	100.0	99.0	100.00	100	99	1.0
Toluene	0.000	101.0	102.0	100.00	101	102	1.0
Benzene	0.000	106.0	105.0	100.00	106	105	0.9
MTBE	0.000	96.0	98.0	100.00	96	98	2.1
GAS	0.000	926.2	939.2	1000.00	93	94	1.4

SampleID: 32800

Instrument: MB-1

Oil & Grease	0.000	23.1	23.5	20.00	116	118	1.7
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SampleID: 32800

Instrument: GC-6 A

Surrogate1	0.000	113.0	117.0	100.00	113	117	3.5
TPH (diesel)	0.000	362.0	369.0	300.00	121	123	1.9

SampleID: 32800

Instrument: IR-1

TRPH	0.000	24.4	23.8	23.70	103	100	2.5
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$$\% \text{ Recovery} = \frac{(MS - Sample)}{AmountSpiked} \times 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \times 100$$

RPD means Relative Percent Deviation



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### QC REPORT

Date: 03/28/00 Matrix: Soil

Extraction: N/A

Compound	Concentration: mg/kg			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 28797

Instrument: GC-7

Surrogate1	0.000	87.0	95.0	100.00	87	95	8.8
Xylenes	0.000	300.0	319.0	300.00	100	106	6.1
Ethyl Benzene	0.000	93.0	97.0	100.00	93	97	4.2
Toluene	0.000	94.0	97.0	100.00	94	97	3.1
Benzene	0.000	93.0	98.0	100.00	93	98	5.2
MTBE	0.000	89.0	100.0	100.00	89	100	11.6
GAS	0.000	972.7	1093.8	1000.00	97	109	11.7

SampleID: 28793

Instrument: GC-11 A

Surrogate1	0.000	110.0	109.0	100.00	110	109	0.9
TPH (diesel)	0.000	271.0	282.0	300.00	90	94	4.0

$$\% \text{ Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2100$$

RPD means Relative Percent Deviation



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# QC REPORT

## VOCs (EPA 8240/8260)

Date: 04/05/00-04/06/00 Matrix: Water

Extraction: N/A

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	MS	MSD	

SampleID: 41000

Instrument: GC-10

Surrogate	0.000	97.0	95.0	100.00	97	95	2.1
tert-Amyl Methyl Ether	0.000	105.0	104.0	100.00	105	104	1.0
Methyl tert-Butyl Ether	0.000	83.0	82.0	100.00	83	82	1.2
Ethyl tert-Butyl Ether	0.000	93.0	93.0	100.00	93	93	0.0
Di-isopropyl Ether	0.000	91.0	90.0	100.00	91	90	1.1
Surrogate	0.000	117.0	112.0	100.00	117	112	4.4
Toluene	0.000	89.0	94.0	100.00	89	94	5.5
Benzene	0.000	98.0	103.0	100.00	98	103	5.0
Chlorobenzene	0.000	82.0	85.0	100.00	82	85	3.6
Trichloroethane	0.000	80.0	82.0	100.00	80	82	2.5
1,1-Dichloroethene	0.000	115.0	112.0	100.00	115	112	2.6

$$\% \text{ Recovery} = \frac{(MS - Sample)}{AmountSpiked} \times 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \times 100$$

RPD means Relative Percent Deviation



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### QC REPORT

### VOCs (EPA 8240/8260)

Date: 04/10/00-04/11/00 Matrix: Soil

Extraction: N/A

Compound	Concentration: ug/kg			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 28778

Instrument: GC-4

Surrogate	0.000	113.0	106.0	100.00	113	106	6.4
Toluene	0.000	99.0	97.0	100.00	99	97	2.0
Benzene	0.000	102.0	100.0	100.00	102	100	2.0
Chlorobenzene	0.000	92.0	90.0	100.00	92	90	2.2
Trichloroethane	0.000	91.0	87.0	100.00	91	87	4.5
1,1-Dichloroethene	0.000	110.0	107.0	100.00	110	107	2.8
Surrogate	0.000	105.0	104.0	100.00	105	104	1.0
tert-Amyl Methyl Ether	0.000	102.0	107.0	100.00	102	107	4.8
Methyl tert-Butyl Ether	0.000	82.0	87.0	100.00	82	87	5.9
Ethyl tert-Butyl Ether	0.000	97.0	106.0	100.00	97	106	8.9
Di-isopropyl Ether	0.000	99.0	106.0	100.00	99	106	6.8

$$\% \text{ Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2.105$$

RPD means Relative Percent Deviation

19519 ZAC.16

McCAMBELL ANALYTICAL INC.

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PACHECO, CA 94553

Telephone: (510) 798-1620

Fax: (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH  24 HOUR  48 HOUR  5 DAY

Report To: JOHN MRAKOVICH Bill To: SAME

Company: ALLCAL ENVIRONMENTAL  
27973 HIGH COUNTRY DRIVE  
HAYWARD, CA 94542

Tele: (510) 581 2320 Fax: (510) 681 8490

Project #: 147 Project Name: LED SCAFFOLD

Project Location: 1420 162<sup>nd</sup> AVENUE, SAN LEANDRO, CA

Sampler Signature: John Markovitch

Analysis Request

Other

Comments

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				BTEX & TPH as Gas (602/8020 + 8015)/MTBE TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB'S ONLY	EPA 624 / 8240 / 8260 <u>MTBE CONF.</u>	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239 2/6010)	RCI	Other	Comments						
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other																						
SBI-3.0-3.5	SB-1	3/28/00	9:15	1	SLEEVES	X					X																									
SBI-5.0-5.5	↓	↓	9:20	1	↓	X					X																									34134
SBI-10.0-10.5	↓	↓	9:30	1	↓	X					X																								34135	
SB2-11.5-12.0	SB-2	↓	10:10	1	↓	X																													34136	
SB2-W	SB-2	↓	10:25	2	2-40ml VOA	X					X										X														34137	
																																			34138	

off Hold 4-300 per note  
run for TPH(S) BTEX/MTBE

MTBE CONF. BY 8260 4/10

ICE/GOOD CONDITION/HEAD SPACE ABSENT ✓  
PRESERVATION APPROPRIATE CONTAINERS ✓  
VOA(S) ORG METALS OTHER ✓

Relinquished By: <u>John Markovitch</u>	Date: <u>3/28/00</u>	Time: <u>1350</u>	Received By: <u>Bill Butts</u>
Relinquished By: <u>Bill Butts</u>	Date: <u>3/28</u>	Time: <u>15:00</u>	Received By: <u>Jana A Butts</u>
Relinquished By:	Date:	Time:	Received By:

Remarks: ANALYZE SBI-5.0-5.5 & SBI-10.0-10.5 ONLY, IF CONTAMINATES DETECTED IN SBI-3.0-3.5. CONFIRM MTBE IN EACH MEDIA BY EPA 8260 IF DETECTED.

Added on 4-300 with J.M. Sample