Groundwater Monitoring Report Beck Roofing Company 21123 Meekland Avenue, Hayward, Alameda County August 11, 1999

Prepared for: Mrs. Mary Beck, Beck Roofing Company, 21123 Meekland Avenue, Hayward CA 94541

Prepared by: Heilshorn Environmental Engineering, P.O. Box 20546, El Sobrante, CA 94820 0546, (510) 222-7968, fax (510) 222-8573, email: edheilshorn@earthlink.net

Dear Mrs. Beck:

This letter report responds to a July 25, 1999 letter from Mr. Amir Gholami of the Alameda County Department of Environmental Health to Beck Roofing Company (Beck Roofing). That letter specified that monitoring well MW-3 should continue to be monitored. The results of a monitoring event on July 21 are included in this letter. Figure 1 is the site location map.

SITE BACKGROUND

Beck Roofing is a commercial roofing business. The property is located on the south side of Meekland Avenue, 21123 Meekland Avenue. Site usage includes equipment and materials storage, shop and office facilities. Site specific information was obtained from the owners, Mr. Charles and Mrs. Mary Beck, or from existing environmental reports.

Beck Roofing installed an underground 1000-gallon steel tank during the 1970's following the gasoline crisis. The tank stored gasoline for refueling company trucks and serviced a single dispensing pump. Beck Roofing contracted with R.L. Stevens to have the tank tightness tested. The test was performed on January 11, 1990. R.L. Stevens followed the Precision Test Criteria as established by N.F.P.A. Publication 329. R. L. Stevens reported that the tank was tight at the time of the test, January 1990.

The tank was removed during May 1991. Several stages of environmental investigation, remediation and monitoring followed, from 1991 until the present. Figure 2 shows the facility layout and location of four groundwater monitoring wells and other soil borings installed during the environmental investigations.

SITE GEOLOGY AND HYDROGEOLOGY

L&W Environmental Services (L&W) January 1992 report briefly describes area geology and hydrogeology as follows. Site elevation is approximately 55 feet above sea level. San Francisco Bay to the west and the Berkeley Hills to the east affect site geology. Alluvial and bay sediments underlie the site with basement rock at depth. "Groundwater in this region is located at relatively shallow depths, in granular aquifers laid down by alluvial action on the nearby Berkeley Hills. Groundwater is often contained in granular deposits layered and confined by various fine grained deposits at depths of about 20 feet below ground surface." (L&W, 1992)

Site hydrogeology describes aquifer characteristics such as the groundwater flow direction, gradient, levels and well productivity. Groundwater flows roughly west across this site. MW-3 is down gradient from the former underground tank location. The groundwater gradient varies from approximately 0.001 to 0.005 feet per foot. Water levels in the wells rose following well installation per the Anderson and Lush Geosciences quarterly monitoring reports. This suggests that the groundwater is partially confined. Groundwater elevations the range from a high of 21.2 feet bgs in MW-4 (2/5/97) to a low of 30.1 feet bgs in MW-1 and MW-4 (10/25/94).

SITE ENVIRONMENTAL ACTIVITIES — GROUNDWATER

Four groundwater monitoring wells were installed to determine groundwater quality and the extent of groundwater contamination. These wells have been sampled regularly since installation in 1991 and 1994. The data indicate decreasing concentrations of TPHg and BTEX compounds at low ppm, low ppb, to nondetectable levels. The Alameda County Department of Environmental Health has approved closure of monitoring wells MW-1, MW-2, and MW-4. HE2 will continue to monitor MW-3 for Beck Roofing until benzene concentrations reach levels acceptable for closure.

Well MW-3 was sampled on July 21, 1999. HE2 measured the water level, purged the well, and collected one groundwater sample. Water pH, specific conductivity, and temperature were measured during well purging. Attachment 1 presents the well sampling field data including pH, specific conductivity, temperature, depth to groundwater, and volume purged. No free product or sheen was noted in the purged well water. A slight odor was detected from MW-3.

GROUNDWATER SAMPLING PROCEDURESAND ANALYTICAL RESULTS

The well was purged, then sampled using a new clean polyethylene bailer. Three casing volumes of groundwater were removed from the well prior to sampling. The well was allowed to recover to at least 80% of the initial water level prior to sampling. The groundwater sample was bailed and poured into 40 ml volatile organic analysis (VOA) vials with Teflon septa. The vials were sealed so that no air bubbles were trapped in the vials (zero headspace). Bailed water not collected as a sample was placed in labeled steel drum within the yard. The water in the drum will be disposed as water with low levels of petroleum hydrocarbons.

The sample was labeled, stored on ice and delivered to the laboratory the same day as collection. Sample labels list the project name, sample location, date, sampler's initials, and analyses requested. After collection and labeling, the sample was sealed in a plastic bag and placed in a cooler with ice. The groundwater sample was analyzed for Total Petroleum Hydrocarbons-gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MTBE by EPA Method 8015-8020-modified. The sample was accompanied by a chain of custody form and delivered to a state certified laboratory, McCampbell Analytical, Pacheco, DHS Certification No. 1644) for analysis. Attachment 2 includes the analytical reports and chain of custody forms for the July 1999 groundwater sample.

The analytical results for the July groundwater data indicate low levels of the analyzed gasoline related hydrocarbons and fuel additives in MW-3. MW-3 groundwater contained TPHg at 490 micrograms per liter (μ g/L). Other constituent concentrations: Benzene (5.4 μ g/L), toluene (ND), ethylbenzene (9.6 μ g/L), xylenes (0.60 μ g/L), and MTBE (ND<10). The levels detected in MW-3 are below the MCLs for toluene, ethylbenzene and xylenes and MTBE. Benzene slightly exceeds the MCL of 1 μ g/L.

CONCLUSIONS AND RECOMMENDATIONS

The contaminant plume at Beck Roofing is of limited extent and concentration. Both extent and concentration have decreased over time. Based on these data it is reasonable to assume that the contamination has not migrated off-site, and the current extent of the contamination is limited to a small area around MW-3. The data suggest that the concentrations currently observed in MW-3 would continue to drop naturally over time to nondetectable levels.

Beck Roofing is requesting permission to reduce the monitoring frequency of the remaining monitoring well, MW-3, at the Beck Roofing yard from quarterly to annually.

HE2 recommends that the Beck Roofing site be classified as a low-risk soil and groundwater site per the LLNL report and RWQCB memo of January 5, 1996. The basis for this recommendation follows.

- The extent of contamination is limited to less than 250 feet from the presumed source.
- The plume appears stable and decreasing in concentration and extent.
- The shallow groundwater is not used for drinking water within 1/2 mile of the site.

LIMITATIONS

The data, conclusions and recommendations presented in this report were developed in accordance with the generally accepted professional practice. The guidelines, data, conclusions and recommendations developed in, and used for, this report follows California Regional Water Quality Control Board guidelines. The analytical results are based on samples collected as limited locations, at limited times. Therefore, Heilshorn Environmental Engineering cannot have full knowledge of the soil or underlying conditions at the site. Conditions at the site may change with time due to human action or acts of nature. Thus, the findings of this report are subject to change should new information arise.

Please contact me with any questions concerns or information regarding environmental issues at this site. I may be reached by telephone (510-222-7968), fax (510-222-8573) or email (edheilshorn@earthlink.net). Thank you for selecting Heilshorn Environmental Engineering to provide services to your company.

Sincerely,

Heilshorn Environmental Engineering

Elyse D. Heilshorn, P.E. Consulting Engineer

EV Halshon.

ATTACHMENT 1

Field Data

	DWATER MO							
CLIENT	BOXE.	1 1/2	3	DATE	: //	<u> </u>	/ Initials:	
	ss: <u>21123</u>							
WELL L	OCATION: _^1	W.3 7	7 2t	ber in	· · · · · ·			
WELL I	D_11W-3				SAMP	LE ID:_		· <u>·</u>
START	гіме: 2.75	SAMI	PLING T	IME:_		END	TIME	
Depth to	well bottom (from	m top of ca	sing) <u>- 9</u>	<u>′.7</u> I	Height o	of water	column,ft:	
Depth to	water (from top	of casing)	2 4 75	_	CASIN	NG VOI	LUME	·7 gal
Casing vol	F DIAMETER ume per linear foot 2	eal 0.17	0.38	0.67	1.02	1.50	8' 2.6	
Calculate	ed purge volume:	5./10		Actual	Purge v	/olume: ₋	in 6 sel	
FIELD N	MEASUREME N	TS						
Time	Volume, gal	Temp °F	Conduct			pН	Color	Turbidity NTU
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ك. ك	5.0	09	70	150		£ ²	* **	
Z: 07	26.0	68	7.10	<u> </u>	.))	2.2	3/1-	
SAMPL	ING :	. •						
Odor: _/	NODE IN	J. S	,	Well 8	30% rec	harged?	953	
Sample	container: #	VOA	#_2	_Liter	Bottle	#	_Other	-
P rese rva	tive: HCL	_ Ice						
ANALY	SES:	TP H9	B72	2>/	1.7	7 /2	5	
	equipment:							
	g equipment							
REMAR	RKS:							

ATTACHMENT 2

Analytical Report and Chain of Custody

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

Heilshorn Environmental Eng.	Client Project ID: Beck Roofing	Date Sampled: 07/21/99
P.O. Box 20546		Date Received: 07/22/99
El Sobrante, CA 94820	Client Contact: Elyse Heilshorn	Date Extracted: 07/24/99
	Client P.O:	Date Analyzed: 07/24/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

Lab ID	Client ID	Matrix	TPH(g)⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
15775	MW3	w	490,a	ND<10	5.4	ND	9.6	0.60	101
			 						
					·····				
-									
otherwi	g Limit unless se stated; ND	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
	t detected above porting limit	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

[&]quot; 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.

110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/23/99-07/24/99 Matrix:

WATER

	Concent	ration	(ug/L)		% Reco	very	· · · · · · · · · · · · · · · · · · ·
Analyte	te Sample Amount (#15450) MS MSD Spiked		MS	MSD	RPD		
TPH (gas) Benzene	0.0	104.4	105.2	100.0	104.4 92.0	105.2	0.7
Toluene	0.0	9.5	9.8	10.0	95.0		4.3 3.1
Ethyl Benzene Xylenes	0.0	9.8 29.4	10.0 30.2	10.0	98.0 98.0	100.0 100.7	2.0 2.7
TPH(diesel)	0.0	8020	8254	7500	107	110	2.9
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100

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		SAMF	LING		ည	1	MA	ru)	(N PR	IETI ESE	HOD RVE	D	Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petrolcum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)		BTEX ONLY (EPA 602 / 8020)		EPA 608 / 8080 PCB's ONLY	826	EPA 625 / 8270	y EF			Lead (7240/7421/239.2/6010)						
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				# Containers	Type Containers	Water	Sol	Sludge	ة	ည	잎	ONE	Other	BTEX & TPH as	HH.	Tota	Tota	EPA	BTE	EPA	EPA	EPA	EPA	PAF	CAM-17 Metals	LUI	Len(RCI	,				
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ATTACHMENT 3

BORING LOGS AND WELLS

PROJECT: Beck Roating Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

INITIAL GW DEPTH: Not Enc.

DATE: 07/14/93

HOLE DIA: 8 in.

FINAL GW: Not For

LOGGED BY: LAR

SAMPLER: California

INITIAL GW DEPTH: Not Enc.	FINAL G	W: Not E	inc.		HO	LE ELEY.: NA
OESCRIPTION	USCS CLASS	GRAPHIC LOG	OEP TH	SAMPLE	BLOWS/FT.	REMARKS
SILTY CLAY Medium plastic; minor fine sand; moist; dusky yel. brown (IOYR 2/2). SANOY CLAY: Low to med. plastic; approx. 35% very fine sand; moist; moderate yel. prown (IOYR 5/4). - Greenish gray at IO'. Hote Abandoned at 1i.5' and backfilled with heat dement grout.	CL		0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21		23	Product odor noted in bottom of sample at 11,5".
I CUITO LA DYCHAGO			-22- -23- -24- -25- -26- -27- -28- -30- -32- -32- -33- -33- -33-			

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. B-3: Located on northern side of slurry-filled excavation from gasdine tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward, Calif.

Project No. 539.44

Page 1 of 1

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COURT COOK OF NIM

PROJECT: Beck Roofing Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

DATE: 07/14/93

HOLE DIA: 8 in.

ETHILL CHI NOT Eng

LOGGED BY: LAR

SAMPLER: California

INITIAL GW DEPTH: Not Enc.	FINAL GM	t: Not E	nc.		HOL	E ELEY: NA
OESCRIPTION	USCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE	BLOWS/FT.	REMARKS
			- 0 -			
d" of Baserock at surface.	CL		1 -			
SILTY CLAY: Medium plastic; minor fine sand; moist; dusky yet brown 1104A 2/21.			- 2 - - 3 -			
SANDY CLAY: Low to med, plastic: approx. 35% very fine send mois), moderate yet, brown (IQYR 5/4).			- 5 - - 6 -	M	19	
·			8 - 9 - 10 -			
			12 -	M	12	
SILTY SAND. Fine grained: pale yellow brown (IDYR 6/2).	SM		- 14 - - 15 - - 16 -	X	10	Product odor noted in sample at 15'.
More Abanconed at 16.5° and backfilled with neat cement grout			17 - 18 - 19 -			
			-20- -21-	4		
			-22- -23- -24-	1		
			-25- -26-			
			-27- -28- -29-			
			-30- -31-			
			-32- -33-	1		
			-34- -35-	† 		

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. 8-4: Located on northern side of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward, Calif.

Project No. 539,44

Page 1 of I

PROJECT: Beck Rooting Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

INITIAL BY DEPTH: Not Enc.

DATE: 07/14/83

HOLE DIAL 8 in.

FINAL GW: Not Enc.

LOGGED BY: LAR

SAMPLER: California

HOLE ELEV.: NA

INITIAL BY DEPTH: NOT ENG.	FINAL GW	1101 6	14.		1104	E ELEA" MA
DESCRIPTION	USCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE	BLOWS/FT.	REMARKS
5" of Baserock at surface. SILTY CLAY: Medium plastic, minor fine sand; moist; dusky yel. brown floyR 2/2). SANDY CLAY: Low to med. plastic; approx. 35% very fine sand; moist; moderate yel. brown (IOYR 5/4). SILTY SAND: Fine greined, pale vellow brown (IOYR 6/2); approx. 50% sitty fines. Hole Abandoned at 16.5" and backfilled with near dement grout.	SM		0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 22 23 24 25 25 26 27 30 31 32 33 34 35 35 35 35 35 35 35 35 35 35 35 35 35		19	Product oder noted in sample at 15'.

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California Notes:

BORING NO. 8-5: Localed on northern side of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward. Calif.

Protect No. 539,44

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ZO. TT - OOOO ZT NO

Boring Log No. B-6 PROJECT: Beck Roofing Co., Hayward, CA DATE: 07/14/93 LOGGED BY: LAR DRILL RIG: Hollow Stem Auger HOLE DIA.: 8 in. SAMPLER: California INITIAL GW DEPTH: Not Enc. FINAL GW: Not Enc. HOLE ELEV.: NA CLASS GRAPHIC LOG SAMPLE BLOWS/F1 DEPTH DESCRIPTION REMARKS nscs (0 à" of Baserock at surface. SILTY CLAY Medium blastic; minor fine sand; moist; dusky yel. brown (10YR 2/2). SANDY CLAY Low to med. plastic: approx. 35% very fine sand moist; moderate yet, brown (IOYR 5/4). 18 10 SILTY SAND: Fire grained; pale yellow brown (IDYR 6/2); SM 12 eoprox, 50% silty fines. 11 -12 - Color at 15' is olive gray (5Y 4/I). Product odor noted in sample at 15". 9 16 Hole Abandoned at 16.5' and backfilled with neat cement 17 C10UE. 18 19 20-22 25 26 27-28 29 0E 31 34. 35 Notes: LOUIS A. RICHARDSON Project No. 539,44

BORING NO. B-6: Located on northern side of sturry-filled excavation from gasoline tank removal at Beck Roofing Co.

21123 Meekland Ave., Hayward, Calif.

Consulting Engineering Geologist

Mountain View, California

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Page I of I

PROJECT: Beck Roofing Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

DATE: 07/14/93

HOLE DIA: 8 In.

LOGGED BY: LAR

SAMPLER: California & Continuous

INITIAL GN DEPTH: Not Enc. ft.	FINAL GW		nc. ft.			E ELEV.: NA
DESCRIPTION	USCS CLASS	GRAPHIC LOG	OEPTH	SAMPLE	BLOWS/FT.	REMARKS
	CI	///	- 0 -			
6" of Gaserock at surface. STITY CLAY, undire planting planting speciments during	CL		- 1 -			
SILTY CLAY: Medium plastic; minor fine sand; moist; dusky yel. brown (iOYR 2/2).			2 - 3 -			,
*** T 6 0.000 B) (W. C.			4 ~			
SANDY CLAY: Low to med. plastic; approx. 35% very fine cand; moist; moderate yet. brown (10YR 5/4).			6 - 7 -	Ø	16	
			- 8 -			
			1-9- -10-			
			11 -	M	11	
			13 -			
SILTY SAND: fine grained: pale yellow brown (IDYR 6/2); aporox. 15% sitty tines.	SM		- 14 - - 15 -			
			16	X.	11	Continuous sampler used below 18.5"
- Color at 17.7' is dark green-gray (56-4/I).			- 17 - - 18 -			
			⊢ 19 − - - 20 −			Product oder evident at 20'.
CLAY: Silty, fow plasticity, moist, dark yel, brown mollied mad, yel, brown.	CL		21-			Thousand Control Control
Mad. ye. Grown.			-22-			Pocket penetrometer reading is 0.5 TSF.
Hole Abandoned at 23° and backfilled with neat cement growt.			-23- -24-	uu.		
y • • • • • • • • • • • • • • • • • • •		1	-25-			
	!	1	-26-			
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			-34-			
			-35-			

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. 8-7: Located on northern side of sturry-filled excavation from gasoline tank removal at Beck Roofing Co. 2023 Meekland Ave., Hayward, Calif.

Project No. 539,44

Page | of |

PROJECT: Beck Ropfing Co., Hayward, CA DRILL RIG: Continuous Flight Auger

INITIAL GW DEPTH: Not Enc.

DATE: D7/15/93

HOLE DIA.: 6 in.

LOGGED BY: LAR
SAMPLER: None

FINAL GW: Not Enc.

HOLE ELEV.: NA

NITIAL GW DEPTH: Not Enc.	FINAL GW	: Not Er	ic.	Н	E ELEV.: NA			
OESCRIPTION	USCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE BLOWS/FT.	REMARKS			
SILTY CLAY: Medium plastic; minor fine sand: moist; dusky yell prown (10YR 2/2). SANDY CLAY: Low to med. plastic; approx. 35% very fine sand; moist, moderate yell brown (10YR 5/4).	CL		0 2 3 4 7 8 9		Boring advanced with continuous flight auger until product odor was noted in cuttings.			
SILTY SAND: Fine grained; cale yellow brown (10YR 6/2); approx. 15% silty fines.	SM		-10 - -11 - -12 - -13 - -14 - -15 - -16 -		Product odor evident at 17".			
Grouf Hole Abandoned at 18' and backfilled with heat cement			- 18 - - 19 - - 20 - - 21 - - 22 - - 23 - - 24 -					
			-25- -26- -27- -28- -30- -31- -32- -33-					
[Note			-34- -35-					

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California Notes:

BORING NO. 8-8. Located west of sturry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward, Calif.

Project No. 539,44

Page 1 of 1

PROJECT: Beck Roofing Co., Hayward, CA

DRILL RIG: Continuous Flight Auger

INITIAL GW DEPTH: Not Enc.

DATE: 07/15/93

HOLE DIA: 6 in.

FINAL GW: Not Enc.

LOGGED BY: LAR

SAMPLER: None

HOLE ELEV.: NA

NITIAL GW DEPTH: Not Enc.	FINAL GW	: Not Er	10.		HOL	E ELEV.: NA
DESCRIPTION	USCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE	BLOWS/FT.	REMARKS
6" of Baserock at surface. SILTY CLAY: Medium plastic; minor fine sand; moist; dusky yet brown (10YR 2/2). SANDY CLAY: Low to med. plastic; approx. 35% very fine sand; moist; moderate yet, brown (10YR 5/4).	CL		0 1 2 3 4 5 7 8 9 10			Boring advanced with continuous tlight auger until product odor was noted in cuttings.
SILTY SAND: Fine grained, pale yellow brown (IOYR 6/2); approx, 15% tilty lines. Fole Abandoned at '9' and backfilled with neat cement group.	SM		11			Product odor evident at 18".
			20 - 21 - 22 - 23 - 24 - 25 - 26 - 27 - 28 - 29 - 30			
			-31- -32- -33- -34- -35-			

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California Notes:

BORING NO. 8-9 Located west of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Heyward, Calif.

Project No. 539.44

Page I of I

PROJECT: Beck Roofing Co., Hayward, CA DRILL RIG: Continuous Flight Auger

INITIAL GW DEPTH: Not Enc.

DATE: 07/15/93

LOGGED BY: LAR

HOLE DIA: 8 in.

SAMPLER: None

FINAL GW: Not Enc.

HOLE ELEV.: NA

INITIAL GW DEPTH: Not Enc.	FINAL GI	r, NOT E	TC.		HOLE ELEV.: NA						
DESCRIPTION	NSCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE	BLOWS/FT.	REMARKS					
			L o -								
Cor Baserock at surface. SILTY CLAY: Redium plastic; minor (ine sand; moist; dusky vet prown (IOYR 2/2).	CL		1 2 3		:	Boring advanced with continuous flight auger until product odor was noted in cuttings.					
SANDY CLAY: Low to med. plastic; approx. 35% very fine sand: moist moderate yel. brown (10YR 5/4).			5 6 7 8 10 11 12								
SILTY SAND: Fine grained: pale yellow brown [10YR 6/2]; approx. 15% siity fines.	SM		13 - 14 - 15 - 16 - 17 - 18 -	1		Product odor evident at 18'.					
Hole Abandoned at 19° and backfilled with heat cement grout.			19 - 20 - 21 - 23 - 24 - 25 - 28 - 29 - 31 - 32 - 33 - 35 - 35 - 35 - 35 - 35 - 35								

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California Notes:

BORING NO. B-10: Located west of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward, Calit,

Project No. 539.44

Page 1 of 1

THEFT OFFT OF NIME

PROJECT: Beck Roofing Co., Hayward, CA

DATE: 07/15/93

LOGGED BY: LAR

ORILL RIG: Continuous Flight Auger

HOLE DIA.: 6 in.

SAMPLER: None

INITIAL GW BEPTH: Not Enc.

FINAL GW: Not Enc.

HOLE ELEV: NA

INITIAL GW BEPTH: Not Enc.	FINAL GW	: Not E	nc.		HOL	E ELEV.: NA
DESCRIPTION	USCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE	BLOWS/FT.	REMARKS
51 of Baserock at surface.	CL	777	<u> </u>			
SILTY CLAY: Medium blastic; minor fine sand: moist; dusky ye; brown (10YR-2/2).			3 -			Boring advanced with continuous flight auger until product oder was noted in cuttings.
SANDY CLAY: Low to med. plastic: approx. 35% very fine sand: moist: moderate yel. brown (IOYR 5/4).			5 6 7 8 9 10 11 12			
SILTY SAND. Fine grained: pale yellow brown (10YR 6/2); approx. 15% silty fines.	SM		13 15 16 17 18 19			Product odor evident at 18'.
Hole Abandoned at 19° and backfilled with neat cement grout.			20-			
			21 – 22 – 23 – 24 – 25 – 26 – 26 – 26 – 26 – 26 – 26 – 26			
			27 28 29 30 31 32 33		•	·
			-34- -35-			

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. B-It Located west of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward, Calil.

Project No. 539.44

Page 1 of 1

THE ST. COOT ST. VIBL

Boring Log No. B-12 PROJECT: Beck Roofing Co., Hayward, CA DATE: 07/15/93 LOGGED BY: LAR DRILL RIG: Continuous Flight Auger SAMPLER: None HOLE DIA: 6 in. HOLE ELEY: NA INITIAL GW DEPTH: Not Enc. FINAL GM: Not Enc. CLASS GRAPHIC LOG SAMPLE DEPTH BLOWS/F REMARKS DESCRIPTION uscs i 0 CL 6" of Baserock at surface. Boring advanced with continuous flight auger until product odor was noted in cuttings. SILTY CLAY: Medium plastic; minor fine sand; moist; dusky yel. Drown (IDYA 3/2), SANDY CLAY: Low to med. plastic; approx. 35% very fine sand; moist; moderate yet, brown (10YR 5/4), SILTY SAND: Fine grained: pale yellow brown (10YR 6/2); approx. 16% suly fines. 15 SANDY CLAY: Med plastic: approx. 20% fine sand; mod. yet, brn. 25 Slight product odor evident at 25'. Hole Abandoned at 25' and backfilled with near cement 26 grout 27 28 29

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California Notes:

BORING NO. 8-12. Located west of surry-filled excavation from gasoline tank removal at Beck Rooting Co. 21123 Meekland Ave., Hayward, Calif.

Project No. 539.44

Page t of I

PROJECT: Beck Rooting Co., Hayward, CA

TRILL RIG: Continuous Flight Auger

INITIAL GW DEPTH: Not Enc.

DATE: 07/15/93

HOLE DIA: 6 in.

FINAL GW: Not Enc.

LOGGED BY: LAR

SAMPLER: None

HOLE ELEV.: NA

DESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	BLOWS/FT.	REMARKS
E" of Baserock at surface. SILTY CLAY, Medium plastic: minor fine sand; moist; dusky yet, prown (10∀R 2/2).	CL		0 - 2 - 3 - 4 - 5 - 6 -			Boring advanced with continuous flight auger until product oder was noted in cuttings.
CLAYEY SAND: Fine-grained with 10% line gravet; 10-15% moss; slightly moist; moderate yet. Drown (10YR 5/4).	SC		8 9 10 11 12 13 14 15 16 17			
SANDY CLAY: Med, plastic: approx. 20% fine sand; mod, yel. brn.	CL		18 - 19 - 20 - 21 - 22 - 23 - 24 -			
Hole Abandoned at 25° and backfilled with neat cement grout.			25- -26- -27- -29- -30- -31- -32- -33- -34- -35-			Slight product odor evident at 25°.

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California Notes:

BORING NO. B+13: Located south of slurry-filled excavation from gasoline tank removal at Beck Rooting Co. 21123 Meekland Ave., Hayward, Calit.

Project No. 539.44

Page 1 of 1

PROJECT: Beck Roofing Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

DATE: 07/15/93

HOLE DIA.: 8 in.

LOGGED BY: LAR

SAMPLER: California & Continuous

CLAY: Low to medium plasticity; moist; ofive gray mottled CL 19 - 20 - 21 - 21 - 21 - 22 - 22 - 23 - 23 - 23	INITIAL GW DEPTH: 28.5 ft.	FINAL GW	: 28.5 1	t.		HOL	E ELEV.: NA
SILTY CLAY Medium plastic: minor fine sand: moist; mod. 72 brown (REYR 5/4). CLAYEY SAND Tine-grained with IQS line gravet approx. O'A clayey that, moist, enderate yet, brown (ROYR 5/4). SILT Nod, yet, orn. motified dark yet, brown (ROYR 5/4). SILT Nod, yet, orn. motified dark yet, brown (ROYR 5/4). SILT Nod, yet, orn. motified dark yet, brown; v. moist. CLAY Low to medium phasticity; moist, olive gray motified take brown, moist. CLAY Low to medium phasticity; moist, olive gray motified take brown, moist. - 4" space least 22. - color polow 21" is dark yet, orn. with greenish gray class at 22. - color polow 21" is dark yet, orn. with greenish gray class at 22. - color polow 21" is dark yet, orn. with greenish gray class at 22. - color polow 21" is dark yet, orn. with greenish gray class	DESCRIPTION	USCS CLASS	GRAPHIC LOG	нтөэо	SAMPLE	BLOWS/FT.	REMARKS
SILTY CLAY Medium plastic: minor fine sand; moist; mod. 7	A	Ci		- 0 -			
CLAYEY SAND Sine-grained with 10% line gravet approx. O'A clayey : nest moist, moderate yell, brown (10YR 5/4) SILT Nod. yell orn, moist, moderate yell, brown; v. maist, line gravet approx. SILT Nod. yell orn, moist, moderate yell, brown; v. maist, line 113 - 144 - 15 - 166 - 17 ITPH = ND @ 10' TPH = ND @ 10' T	SILTY CLAY, Medium plastic; minor fine sand; moist; mod.			1 2 3 - 3 - 4 - 3			
SILT Mod. yel. orn. motitied dark yel. brown: v. moist. CLAY: Low to medium plasticity: moist, olive gray motited 1 olive brown; moist. - 3" sand lens at 22". - color below 21" is dark yel. brown with greenish gray wartical pores - color is it. olive gray (5Y 5/2) below 28" - color is it. olive gray (5Y 5/2) below 28" - color Terminated at 33" and backfilled with heat cement growt. - color Terminated at 33" and backfilled with heat cement growt. - color Terminated at 33" and backfilled with heat cement growt.				5 6 7 8 H	N	16	TPH = NO @ 5'.
SILT Mod. yel. orn. motiled dark yel. brown: v. moist. CLAY: Low to medium plasticity; moist, dive gray mottled Divide brown, moist. - 3" sand lens at 22. - color below 21" is gark yel. orn. with greenish gray vertical pores - color is it. olive gray (5Y 5/2) below 28' - color is it. olive gray (5Y 5/2) below 28' - color Terminated at 33" and backfilled with heat cement growt.	CLAYEY SAND. Sine-grained with 10% fine gravel; approx. 10% clayey these moist; moderate yell brown (10YA 5/4).	SC		9 -			TOU ~ NO @ IO'
SILT Mod. yel. orn. mottled dark yel. brown: v. moist. CLAY: Low to medium plasticity; moist, olive gray mottled CL 31: sand lens at 22: - color below 21: is gark yel. orn. with greenish gray vertical pores - color is it. olive gray (5Y 5/2) below 28: - color is it. olive gray (5Y 5/2) below 28: - color Terminated at 33' and backfilled with heat cement grout.				- 11 - - 12 - - 13 -	M	20	TEN - NO W TO
CLAY: Low to measum plasticity; moist, olive gray motified 19 20 20 21 21 21 22 2 23 2 23 2 24 25 25 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25				- 14 - - 15 - - 16 -		17	TPH = NO @ 15'
CL 20— If you have brown; moist, If H = ND § 19: TPH = 2.7 ppm @ 22' TPH = 2.7 ppm @ 22' Pocket penetrometer reads 1.5 TSF in clay. TPH = 23 ppm @ 26' TPH = 4.1 ppm @ 27' TPH = 91 ppm @ 28.5' TPH = 31 ppm @ 38.5' TPH = 31 ppm @ 38.5	SILT Mod. yel. orn. mottled dark yel. brown; v. moist.	ML		18 -			Continuous sampler used from 16.5 to 33'.
- color below 20 is Gark yell, bith, with greenish gray vartical pores - color below 20 is Gark yell, bith, with greenish gray vartical pores - color is II. olive gray (5Y 5/2) below 28' - color is II. o	CLAY: Low to medium plasticity; moist, dive gray mortled it. plive brown; moist.	CL		1- 1- 1-		-	-TPH = ND & 19:
Pockel penetrometer reads 1.5 TSF in clay. The color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of the color is it. olive gray (5Y 5/2) below 28' The square reconstruction of	- 4" sand lens at 22".			-22- -23-			TPH = 2.7 ppm @ 22°
TPH = 4.1 ppm @ 27' TPH = 91 ppm @ 28.5' Groundwater encountered at 28.5'. Water sample taken.				-24- -25-			Pocket penetrometer reads 1.5 TSF in clay.
28.5°. Water sample taken. -30	" Color is It. olive gray (5Y 5/2) below 28"			↑ 1			TPH = 4.1 ppm @ 27
grout.				-30- -31- -32-			Ly Groundwater encountered at 28.5°.
				34-			

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. B-14: Located on south side of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21/23 Meekland Ave., Hayward, Calif. Project No. 539.44

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PROJECT: Beck Roofing Co., Hayward, CA

ORILL RIG: Hollow Stem Auger

DATE: 07/15/93

HOLE DIA: 8 in.

LOGGED BY: LAR

SAMPLER: California & Continuous

INITIAL GW DEPTH: Not Enc.	FINAL GW		nc.			E ELEV.: NA
OESCRIPTION	USCS CLASS	GRAPHIC LOG	DEPTH	SAMPLE	BLOWS/FT.	REMARKS
d' of Baserock at surface. SILTY CLAY: Medium plastic; minor line sand; moist; dusky vet brown (10YR 2/2). SANDY CLAY: Law to med. plastic; approx. 35% very fine sand; moist; moderate yet, brown (10YR 5/4).			0 - 1 - 2 - 3 - 4 - 5 - 6	X	27	
			7 8 9 10 11 12 13		28	
SILTY SAND: Fine grained: pale yellow brown (10YR 6/2) approx. 15% silty lines.			14 - 15 - 16 - 17 - 18 -		27	Continuous sampler used below 18.
- Dark green-gray (56 4/1) silty clay lens at 18 - 19°; very moist. CLAY: Silty, law plasticity, moist; dark yel, brown mottled mod. yel, brown.	CL SM		-19 -20 -21			Slight product odor evident at 19".
Tole Abandoned at 23' and backfilled with neat cement grout.			22- 23- 24- 25- 26- 27- 28- 29- 30- 31- 33- 33- 33-			
1	tos:	4	L33-	1		Resident No.

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. B-15: Located west of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekland Ave., Hayward, Calif.

Project No. 539.44

Page 1 of 1

PROJECT: Beck Roofing Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

INITIAL GH DEPTH: 28.7 ft.

DATE: 07/15/93

HOLE DIA: 8 in.

FINAL GW: 28.7 ft.

LOGGED BY: LAR

SAMPLER: California & Continuous

HOLE ELEY.: NA

NITTAL ON DEPTH. 20.7 II.	FINAL GA.					
DESCRIPTION	USCS CLASS	GRAPHIC LOG	ОЕРТН	SAMPLE	BLOWS/FT.	REMARKS
			L o -			
21 21 Baserock at surface.	Ĉι		<u> </u>			
STLTY CLAY: Medium plastic: minor fire sand; moist; dusky yel. Grawn (IOYR 2/2)			3 -			
			}-4-			
SANDY CLAY: Low to med. plastic; approx. 35% very fine sand; moderate yel. brown (10YR 5/4).			1 5 - 7 6 - 7 - 8 - 8 - 8 - 8 - 8 - 8 - 8 - 8 - 8	Χ	24	TPH = ND 0 5
			 			
			10 -		26	TPH = ND 8 10"
			- "-	Δ	20	
			12 12 ~ 1 13 -	1		
SILTY SAND: Fine grained: pale yellow brown (10YR 6/2), approx. 15% silty fines.	SM	HH	F 14			
			15- 16-	M	28	TPH = NO @ 15'
			. — 17 — 18 —	1_	1	Continuous sampler used from 18'to
 Dark green-gray (56 4/1) silty clay lens at 16 - 19'; very moist 	CL SM		- 19 <i>-</i>			30'.
CLAY. Silty: low plasticity: moist; dark yel. brown mottled	CL		21-	-		
mod. yei. brown.	1		[-22-			
			1-23-			TPH = 6.9 ppm € 23*
- Signtly porous below 25' with It. gray color at pores.			-24- -25-			TPH = 37 ppm @ 24'
- Signify borous below 25 with it. Gray color at boles.	į.		26-			TPH = 48 com @ 26'
			-27-			FR = 40 UDIII & 20
			<u>-</u> 28			TPH = 23 PPM @ 28'
			29- -30-			Ty Groundwater encountered at 28.7'; product oder evident. TPH = 64 ppm 8 29'
			31-	-		
			1-32- 233-	1		Groundwater sample taken.
Hole Terminated at 33° and backfilled with heat cement grout.			34-	4		
-			-35-	7		

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. B-16: Located west of slurry-filled excavation from gasoline tank removal at Beck Rooting Co. 21123 Meekland Ave., Hayward, Calif.

Project No. 539.44

Page I of 1

CHATT COOT OF NILE

PROJECT: Beck Roofing Co., Hayward, CA

DRILL RIG: Hollow Stem Auger

INITIAL GW DEPTH: 29 ft.

DATE: 07/16/93

HOLE DIA: 8 in.

FINAL GW: 29 ft.

LOGGED BY: LAR

SAMPLER: California & Continuous

HOLE ELEY: NA

INTITAL ON DEFIN. 20 St.		•				
DESCRIPTION	USCS CLASS	GRAPHIC LOG	OEPTH	SAMPLE	BLOWS/FT.	REMARKS
			- 0 -			
6" of Baserock at surface.	CL					
SILTY CLAY: Medium plastic: minor fine sand; moist; dusky yel, brown (IQYR 2/2).			2 -			
]		- 4 -			
SANDY CLAY: tow to med plastic; approx. 35% very fine send; moist; moderate yet, brown (10YR \$/4),			- 5 - - 6 -	N	14	TPH = ND @ 5'.
			8 - - 8 -	4 4	ĺ	
			- 10 - - 11 -	N	10	TPH = NO @ 10'
			E_{13}]		
SILTY SAND. Fine grained, pale yellow brown (10YR 8/2): approx. 15% silty fines.	SM		L 14 -	1		
			- 15 - - 16 -		15	TPH = NO @ 15"
			- 17 - - 18 - - 19 -			Continuous sampler used from 18' to 28'.
– Color is cark green-gray at 20'.			20-			Pocket penetrometer reading is 1.0 TSF in clay.
CLAY: Sitty; tow to medium plasticity; moist; dark yel. Srown mottled mod. yel. brown.	Cr		22- 23-			TPH = 2.4 ppm & 22'
			24- 25-			TPH = 44 ppm @ 24'
			- 26-	4		TPH = 170 ppm @ 25.5"
		1//	£-27-			TPH = 11 pom @ 27'
		1//	[-28-	[]		TPH = 56 pom @ 28.5*
		1//	/ 29-	-		T Groundwater encountered at 29".
			-30- -31-	-4		Water sample taken.
	}	1//	£32	-4		signal complete constitu
		1//	1 33	4		
Hole abandoned at 33' and backfilled with near dement grout.			- 34	4		
	ļ		-35	7		

LOUIS A. RICHARDSON

Consulting Engineering Geologist

Mountain View, California

Notes:

BORING NO. B-17: Located on northern side of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 2023 Meekland Ave., Hayward, Calif.

Project No. 539.44

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15.9 JATOT Boring Log No. B-18 LOGGED BY: LAR DATE: 07/18/93 PROJECT: Beck Roofing Co., Hayward, CA SAMPLER: California & Continuous HOLE DIA: 8 in. DRILL RIG: Hollow Stem Auger HOLE ELEY. NA FINAL GW: 28 ft. INITIAL GW DEPTH: 29 ft. SAMPLE 5 REMARKS DESCRIPTION SOS 0 SM/ML T" of Concrete at surface. SILT: Busky yellow brown - (ICYR 2/2) topsoil. 2 Ct. SILTY CLAY: Med. plastic; moist; mod. yel. brown (IDYR TPH = NO @ 5' 35 8 9 SILTY SAND: Fine-grained with minor gravel; st. moist: maderate yel, brown (IOYR 5/4); approx. 15% fines. - 10 -TPH = NO @ 10' 20 - 11 - 12 - 13 TPH = ND @ 15" 8 - 17 Continuous sampler used from 18'to 18 CL CLAY: Sitty; It. olive gray (SY 5/2) mottled mod. yel. 21 prown; moist; low to med. plastic. TPH = 20 ppm @ 23° TPH = 43 ppm @ 24' 26-- dark yel, orn. with it, gray vertical pores at 28 to 28", TPH = 87 ppm @ 28* - contains some fine sand below 28" TPH = 23 PPM @ 28" TPH = 61 PPM @ 28.5" Groundwater encountered at 29'; 30product odor evident. 31-Groundwater sample taken. Hoje Terminated at 33" and backfilled with heat cement 34 grout.

LOUIS A. RICHARDSON

Consulting Engineering Geologist Mountain View, California

Notes:

BORING NO. B-18: Located east of slurry-filled excavation from gasoline tank removal at Beck Roofing Co. 21123 Meekiand Ave., Hayward, Calif.

35

Project No. 539.44

Page 1 of 1

LOG OF BORING: SB-18

.: Beck Roofing

File:

3288-44

Date: 1 August 1994

Elevation:

feet

Surface:

Water:

None encountered

ELEV DEPTH	SOR SYMBOLS SAMPLER SYMBOL & BLOW COUNTS		uscs	Material Description and Remarks	Orr Density (pcl)	Moisture Content 1%1	Phi	C (ksf)
0 1 2 3 4 5 6 7 8 9 10 11 12 11 11 12 11 1			CL	Dark grey, moist, medium stiff, silty Clay - some fine Sand				
6	11/6	5818-1						
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Mr.Cr	Yellow brown, moist, medium stiff, clayey Silt/silty Clay				
10	₹9/6	5B18-2	2					
13			SP	Light brown, moist, loose-medium dense, medium				
15				coarse, Sand				
16 17 17 18								
1 20 1 20 1 20 1 20			ML-CL	Olive-mottled, moist, soft to medium soft, clayey silt/silty Clay				

Site description and comments:

771



ANDERSON CONSULTING GROUP

Boring: 58-18 Depth: 40,0 ft

אראר בי טטטא ביטי

LOG OF BORING: SB-18 (Continued)

Beck Roofing

File: 3288-44

DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS & BLOW COUNTS	Sample Number	uscs	Material Description and Remarks	Dry Density (pcf)	Moisture Content (%)	Phi	C (ksf)
22 23 24 25 26 27 28	10/6	SB18-3	CL	Olive, moist, stiff, mottled Clay with trace of silt and rhizomes				
29 30 31 32	19/6	\$B18-4		Saturated				
25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40	9/6	5818-5						
38				Boring terminated at 40 feet				



CONSULTING

Boring; SB-18 Depth: 40.0 ft

LOG OF BORING: SB-20

Project: Back Roofing

3288-44 File:

Date: 1 August 1994

Elevation:

feet

Surface:

Water: None encountered

ELEV	SOIL SYMBOLS SAMPLER SYMBOLS	Sample Number	uscs	Material Description and Remarks	Dry Denaity	Moisture Content	Phi	C (ksf)
DEPTH	& BLOW COUNTS				(pcf)	1%)		
		•	a	Dark brown, moist, soft to mediumstiff silty sandy Clay				
1 2 3 4 5 6 7 8 9 10 11 3			CL-ML	Yellow brown, moist, soft to medium stiff, silty clay/clayey silt				
12 13 14 15 15								
17 18 19 19 20 11 21	4/6	5820-	5 <i>P</i>	Light brown, damp, medium dense, Sand				

Site description and comments:



ANDERSON CONSULTING GROUP

Boring: SB-20 Depth: 36.5 ft

LOG OF BORING: SB-20 (Continued)

Project: Beck Roofing

File: 3288-44

ELEV DEPTH	SUIL SYMBOLS SAMPLER SYMBOLS & BLOW COUNTS	Sample Number	vscs	Material Description and Remarks	Dry Density (pcf)	Moisture Content (%)	Phi	C (ksf)
22 23 24 25 26 27 28 29 30 31 31 32 33 34 35 36	3/6	SB20-2	SM	Grey brown, saturated, medium dense silty sand with gravel to 3/8*				
± 38			<u> </u>	Boring terminated at 36.5 feet	<u> </u>	1		1

ANDERSON CONSULTING GROUP

Boring: SB-20 Depth: 36.5 ft

LOG OF BORING: SB-18

Project: Beck Roofing

File: 3288-44

Date: 1 August 1994

Elevation: feet

Surface:

Water: None encountered

ELEV	SOR SYMBOLS	Semple	uscs	Material Description and Remarks	Dry Density (pcf)	Moisture Content (%)	Phi	C (ksf)	
	A BLOW COUNTS	Number	0000						1
DEPTH 0 1 2 3 4 5 6 7 8 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3AMPLER SYMBOLS a BLOW COUNTS 11/4 13 14	- SB18	ML-CI	Dark grey, moist, medium stiff, silty Clay - some fine Sand	Density (pot)	Contest	Phi		
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	-17 -18 -19		-	Olive-mottled, moist, soft to medium soft, clay	rey				

Site description and comments:



ANDERSON CONSULTING GROUP

Boring: SB-18 Depth: 40.0 ft

Figure:

APR-19-2000 11:54

LOG OF BORING: SB-19

Project: Beck Roofing

File: 3288-44

Date: 1 August 1994

Elevation: fe

feet

Surface:

Water:

None encountered

ELEV DEPTH	SOIL SY EAMPLER!	57M80L5	Sample Number	uscs	Material Description and Remarks	Dry Density (pcf)	Moisture Content (%)	Phi	C (ksf)
1 2 3 4 5 6 7 8 9 10 11			•	ML-CL	Dark grey, damp, soft to medium stiff, silty Clay/clayey Silt				
11 12 13		§ 5/6	5B19-1	193			-		
15 16 17 18 18		9/6	5B19-2	SP	Light brown, damp, medium dense, medium coarse, Sand Olive-mottled, moist, soft to medium stiff, Clay				
19		4/6	SB19-	GL 3	Olive brown, moist, medium stiff, silty Clay				

Site description and comments:



ANDERSON CONSULTING GROUP

Boring: SB-19 Depth: 40.0 ft

LOG OF BORING: SB-19 (Continued)

Project: Beck Roofing

File: 3288-44

LEV DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS & BLOW COUNTS	Sample Number	uscs	Material Description and Remarks	Day Density (pcf)	Moisture Cornern (%)	Phi	(ks
22 23 24 25 25 26	12/6	5B19-4						
27 28 28 29				Saturated				
31 32 33		58 19-5						
30 31 32 33 34 35 36 37 38 39 40		SB19-6						
38				Boring terminated at 40 feet				



Boring: SB-19 Depth: 40.0 ft

Contrati

LOG OF BORING: SB-21

Project: Beck Roofing

File: 3288-44

Date: 1 August 1994

Elevation:

feet

Surface:

Water:

None encountered

ELEV DEPTH	SOU SAMBORZ SYMBOLZ SYMBOLZ	Sample Number	uscs	Material Description and Rémarks	Dry Density (pcf)	Maisture Content (%)	Phi	C (kuf)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 30			Fitt	O to 24 feet cement grout backfill				
25 25 26 27 27 28 28 29 29		5821-1 5821-2 5821-3	!	Olive brown-mottled, wet, medium stiff, silty Clay Boring terminated at 30 feet				

Site description and comments:



ANDERSON CONSULTING GROUP

Boring: SB-21 Depth: 30.0 ft

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Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
					0	Brown sandy silty clay, moist, no odor,
						medium plasticity.
2116-5-B1	12	. CL	910		5	Brown sandy silty clay, stiff, moist, no odor, low plasticity.
		SC				Brown clayey sand, fine-grained, moist, no odor, grades downward to a silty clay.
2116-10-В1	10	CL	915		10	Brown sandy silty clay, stiff, moist, no odor, low plasticity.
2116-15 - B1	12	\$P	927		15	Brown sand, fine-grained, medium dense, moist, no odor.
2116-20-B1	8	CL	940		20	Brown sandy silty clay, medium stiff, moist, odor.
L & W Env	11 Jenni:	ngs Stre	el	nc.		Log of Boring Number: B1 Sheet 1 of 2 Beck Roofing
5an F	Francisco	o, Califo	rnia			21123 Meekland Avenue Hayward, California

Date: December, 1991

Figure Number: 7

Project Number: 2116

	Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
Brown sandy silty clay, stiff, moist, strong odor, medium plasticity.							Brown sandy silty clay, stiff,

Boring terminated at 25.5 feet. Groundwater not encountered. Boring drilled 10/31/91 with CME 75 rig.

L & W Environmental Services, Inc.

2111 Jennings Street San Francisco, California Log of Boring Number: B1
Sheet 2 of 2
Beck Roofing
21123 Meekland Avenue
Hayward, California

Project Number: 2116 Date: December, 1991

Figure Number: 7

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION			
					0				
2116-5- B 2	16	·CL	1050		5	Brown silty sandy clay, very stiff, moist, no odor, medium plasticity.			
2116-10-B2	10	SM	1112		10	Brown silty sand, fine-grained, loose to medium dense, moist, no odor.			
2116-15 -1 2	9	51'	1120		15	Brown sand, fine-grained, loose, moist, no odor.			
2116-20-B2	7	CL	1130		20	Brown silty clay, medium stiff, moist, no odor, medium plasticity.			
	2111 Jen	nental S nings St sco, Cal	reet	s, Inc.		Log of Boring Number: B2 Sheet 1 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California			
F	roject N	lumber:	2116		Dat	e: December, 1991 Figure Number: 8			

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
2116-25-B2	9	·CL	1136		25	Brown sandy silty clay, stiff, moist, strong odor, medium plasticity.
2116-30-B2	8	CL	1145		30	Same.

Boring terminated at 30.5 feet. Groundwater not encountered. Boring drilled 10/31/91 with CME 75 rig.

L & W Environmental Services, Inc.	Log of Boring Number: B2 Sheet 2 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California				
2111 Jennings Street San Francisco, California					
Project Number: 2116	Date: December, 1991	Figure Number: 8			

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION			
					0	Brown sandy silty clay, moist, no odor, medium plasticity.			
2116-5-MWJ	20	CL	911		5	Brown sandy silty clay, very stiff, moist, no odor, low plasticity.			
2116-10-MW1	15	SM	917		10	Brown silty sand, fine-grained, medium dense, moist, no odor.			
2116-15-MW1	12	SIT	925		15	Brown sand with subangular gravel, fine-grained, medium dense, moist, no odor.			
2116-20-MW	/1 5	CI.	935			Brown silty day, medium stiff, moist, no odor, low plasticity.			
	2111 Jei	nental (unings S isco, Cal	treet	s, Inc.		Log of Boring Number: MW 1 Sheet 1 of 3 Beck Roofing 21123 Meekland Avenue Hayward, California			
1	'roject N	Number:	2116		Da	Date: November, 1991 Figure Number: 5			

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Sample Number	Blows per Foot	Sail Type	Time	Log	Depth in Feet	DESCRIPTION		
2116-25-MW1	13	CL	944		25	Same, with medium plasticity		
2116-30-MW1	9	CL/ SP	959		30_	Same, but stiff.		
2116-35-MW1	9	SP/ CL	1008		35	Brown sand, fine-grained, medium loose, moist, no odor. Brown silty clay, stiff, moist to wet near top of sample, no odor, medium plasticity.		
2116-40-MW1	11	CL	1025		40	Same.		
L & W Envi	ronme	ental S	ervices,	Inc.		Log of Boring Number: MW 1 Sheet 2 of 3		
		ings Str o, Calif			Beck Roofing 21123 Meekland Avenue Hayward, California			
Рго	ject Nu	ımber:	2116		Date	November, 1991 Figure Number: 5		
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Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
		CL				
2116-45-MW1	13 -	CL/SP	1035		45	Same. Brown sand, fine-grained, medium dense, wet, no odor.

Boring terminated at 45.5 feet.
Groundwater encountered at 30.5 feet.
Boring drilled 10/30/91 with CME 75 rig.
Boring grouted from 45.5 to 39 feet and converted into Monitoring Well 1 on 10/30/91

L & W Environmental Services, Inc.

2111 Jennings Street San Francisco, California Log of Boring Number: MW 1
Sheet 3 of 3
Beck Roofing
21123 Meekland Avenue
Hayward, California

Project Number: 2116

December, 1991

Figure Number: 5

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth In Feet	DESCRIPTION		
		GC			0	3" asphalt cover		
						Brown gravel-sand-clay mixture, moist, no odor.		
2116-5-MW2	18	SM	145		5	Brown silty sand, fine-grained, medium dense, moist, no odor.		
2116-10-MW2	10	SM	150		10	Brown silty sand, fine-grained, loose to medium dense, moist, no odor.		
2116-15-MW2	12	SP	200		15	Brown sand, fine-grained, medium dense, moist, no odor.		
2116 -2 0-MW:	2 6	SP			20	Same, but loose.		
L & W En	vironn	nental S	Service	s, Inc.		Log of Boring Number: MW 2 Sheet 1 of 2		
		nings St sco, Cal				Beck Roofing 21123 Meekland Avenue Hayward, California		
Р	roject N	lumber:	2116		Dat	e: December, 1991 Figure Number: 6		

Sample Number	Blows per Fnot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
2116-25-MW2	19	. CI.	235		25	Brown sandy silty clay, very stiff, moist, no odor, medium plasticity.
2116-30-MW2	18	CL	245		30	Same.
2116-35-MW2	12	SM	255		35	Brown sand, fine-grained, medium stiff, wet, no odor.

Boring terminated at 38 feet.
Groundwater encountered at 33 feet.
Boring drilled 10/30/91 with CME 75 rig.
Boring converted into Monitoring Well 2 on,
10/30/91

L & W Environmental Services, Inc.	Log of Boring Number: MW 2 Sheet 2 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California		
2111 Jennings Street San Francisco, California			
Project Number: 2116	Date: December, 1991	Figure Number: 6	

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
					0	Brown silty clay with sand and gravel, moist, no odor.
2116-5-MW3	9	CL.	115		5	Brown silty clay, stiff, moist, no odor medium plasticity.
2116-10-MW3	. 12	SM	125		10	Brown silty sand, fine-grained, medium dense, moist, no odor.
2116-15-MW3	12	SM	135		15	Same.
						Brown silty clay, stiff; moist, slight odor, medium plasticity.
2116-20-MW3	5	CL			20	Brown silty clay, medium stiff, moist, odor, medium plasticity.
	11 Jenr	ental Solings Str	eet	. Inc.		Log of Boring Number: MW 3 Sheet 1 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California
Pro	Project Number: 2116				Date: December, 1991 Figure Number: 9	

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Sample Number	Blows per Fool	Soil Type	Time	Log	Depth in Feet	DESCIUPTION
2116-25 - MW3	14	CL	207		25	Same.
2116-30-MW3	13	CL	225		30	Same.
2116-35-MW3	13	SM	230		35	Brown silty sand, fine-grained, medium dense, wet.

Boring terminated at 38 feet.
Groundwater encountered at 33 feet.
Boring drilled 10/31/91 with CME 75 rig.
Boring converted into Monitoring Well 3 on 10/31/91

L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California	Log of Boring Number: MW 3 Sheet 2 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California		
Project Number: 2116	Date: December, 1991	Figure Number: 9	

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