

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



~~123~~
R0224

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

January 22, 2003

Mr. and MS. Beck
Beck Roofing
21123 Meekland Ave.
Hayward, CA 94541

Dear Mr. and Ms. Beck:

**Subject: Fuel Leak Site Case Closure, Beck Roofing, 21123 Meekland Ave., Hayward, CA 94541;
Case No. RO0000224; Underground Storage Tank Cleanup Fund No.**

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Residual Soil and groundwater pollution remains in place at this site.
- Case closure for this fuel leak site granted for commercial land use of this property only. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case needs to be re-evaluated

If you have any questions, please call Amir K. Gholami at (510) 567-6876. Thank you.

Sincerely,

Donna L. Drogos, P.E.
Supervising Hazardous Materials Specialist
Underground Storage Tank Local Oversight Program

Enclosures:

1. Case Closure Letter
2. Case Closure Summary

cc: Mr. Roger Brewer (w/enc)
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Mr. Hugh Murphy (w/enc)
City of Hayward
Hazardous Material Office
777 B Street
Hayward, CA 94541

Mr. Toro Okamoto (w/enc)
Division of Clean Water Programs
Underground Storage Tank Cleanup Fund
State Water Resources Control Board
P.O. Box 944212
Sacramento, CA 94244-2120

✓ A. Gholami (w/orig enc), D. Drogos (w/enc), R. Garcia (w/enc)

ALAMEDA COUNTY
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AG

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**Subject: Fuel Leak Site Case Closure, Beck Roofing, 21123 Meekland Ave., Hayward, CA 94541;
Case No. RO0000224; Underground Storage Tank Cleanup Fund No.**

Dear Mr. and Ms. Beck:

This letter confirms the completion of a site investigation and remedial action for the underground storage tank(s) formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

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

Sincerely,

A handwritten signature in black ink that reads "Mee Ling Tung". The signature is written in a cursive, flowing style.

Mee Ling Tung
Director
Alameda County Environmental Health

CASE CLOSURE SUMMARY
UNDERGROUND FUEL STORAGE TANK LOCAL OVERSIGHT PROGRAM
 Alameda County

RDB

AUG 26 2002

I. AGENCY INFORMATION

SEP 18 2002

QUALITY CONTROL BOARD

Environmental Health

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502	Phone: (510) 567-6876
Responsible Staff Person: Amir K.Gholami	Title: Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Beck Roofing,		
Site Facility Address: 21123 Meekland Avenue, Hayward, CA 94541		
RB LUSTIS Case No.: ---	Local Case No.: 3030	LOP Case No.: RO0000224
URF Filing Date: 8/19/91	SWEEPS No.: ---	APN: 429-46-4
Responsible Parties	Addresses	Phone Number
Mr. Charles and Ms. Mary Beck	21123 Meekland Avenue, Hayward, CA 94541	(510)-581-6750
---	---	---

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
A	1,000	Regular unleaded gasoline	Removed: disposed at Erickson, Richmond, CA	May 20, 1991
---	---	---	---	---
Piping			Removed	May 20, 1991

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: four holes found at the bottom of tank.		
Site characterization complete? Yes	Date Approved By Oversight Agency: ---	
Monitoring wells installed? Yes	Number: 4	Proper screened interval? Yes *
Highest GW Depth Below Ground Surface: 25'	Lowest Depth: 31'	Flow Direction: West to Westerly **
Most Sensitive Current Use: Potential Drinking water source		

* Well properly screened prior to approximately 1994/1995, well screens submerged by up to 7 feet after 1995.

** Groundwater gradient has varied 360° at this site.

Summary of Production Wells in Vicinity: There are no production wells identified within ¼ mile of the site.

Are drinking water wells affected? No	Aquifer Name: South Bay Basin
Is surface water affected? No	Nearest SW Name: San Lorenzo Creek is 3960 feet north
Off-Site Beneficial Use Impacts (Addresses/Locations): none identified	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health & Hayward Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	1 @ 1,000 gallons	Disposed at Erickson, Richmond, CA	May 20, 1991
Piping	None reported	Not reported assumed disposed with UST	May 20, 1991
Free Product	None reported	---	---
Soil	350 Cubic yards	Not Reported	1991
	1,033 cubic yards	Soil aerated on site	1994
Groundwater	None reported	---	---

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

Contaminant	Soil (ppm)		Water (ppb)		Contaminant	Soil (ppm)		Water (ppb)	
	Before	After ¹	Before ²	After ³		Before	After ¹	Before ²	After ³
TPH (Gas)	6,800	3,600	91,000	34,000	Benzene	30	5.7	11,000	810
TPH (Diesel)	---	---	---	---	Toluene	450	160	11,000	17
Oil & Grease	---	---	---	---	Ethyl Benzene	1,000	72	3,200	1,400
Heavy Metals	---	---	---	---	Xylene	1,270	220	18,000	2,400
Other (8240/8270)	0.66 ^{***}	NA	NA	11 ^{**}	MTBE (if not analyzed, explain below)	NA	<5.0	NA	3.3 [*]

* 3.3 ppb MTBE, <1.0 ppb TAME, <1.0 ppb ETBE, <1.0 ppb DIPE, and <5.0 ppb TBA, 01/99 sampling event from groundwater monitoring wells.

** 11 ppb EDC (1,2-DCA); <1.0 ppb EDB

*** 0.66 ppm Organic Lead

¹ 11/94 over-excavation samples from 25 feet bgs.

² Grab groundwater samples from 07/93

³ Grab groundwater samples from 11/99

Site History and Description of Corrective Actions:

This site is a roofing business within unincorporated section of Hayward. However, there are residential as well as industrial facilities in the vicinity. Below listed is the chronology of events, which took place at this facility:

May 1991 – Removed a 1,000 gallon steel UST installed in the 1970s. Soil samples were collected at 7.5' and 8' below ground surface (bgs). Noticeable soil contamination in soil present. Up to 1,800 ppm TPHG and 6.4 ppm Benzene detected. Groundwater was not present in UST excavation.

October – November 1991 – Overexcavation of former UST location performed to a depth of 18' bgs. Up to 6,800 ppm TPHG and 40 ppm Benzene was left in place at 18' bgs. Borings G1 through G4 were installed. Soil and grab groundwater samples were collected from these borings. Up to 34,000 ppb TPHG and 810 ppb benzene were detected in groundwater. MW-1, MW-2, and MW-3 installed to a depth of 38' bgs and screened from 28'-38' bgs. Groundwater was encountered at 33' bgs. Sand were encountered generally at approximately 7' to 20' bgs and at depths greater than 35' bgs, with silty and/or sandy-silty clays in between. Soil borings B-1 and B-2 installed.

January 1992 – Additional overexcavation to the east of the former UST location performed to a depth of 23' bgs. Up to 3,820 ppm TPHG and 16 ppm benzene were left in place within this excavation.

July 1993 – Soil borings B-3 through B-18 were installed. The maximum depth explored was 29' bgs and the vertical extent of soil contamination was not defined. Up to 91 ppm TPHG and 11 ppm benzene was detected at 29' bgs.

August 1994 – Soil borings SB-18 through SB-21 were completed to depths of 30' to 40' bgs. SB-18 completed to a depth of 40' bgs was converted to MW-4 screened from 30' – 40' bgs. Up to 550 ppm TPHG and 13 ppm benzene were detected at 29.5' bgs in SB-21 and the vertical extent of soil contamination was not defined. TPHG and benzene were ND in SB-18, SB-19, and SB-20. Temporary wells were installed in SB-18, SB-19, and SB-20 and grab groundwater samples were ND for TPHG and benzene.

November 1994 – additional soil overexcavation performed. An area 30 by 30' centered over the former UST location and apparently encompassing the area of the two previous overexcavation locations was performed. Overexcavation was completed to a depth of 31' bgs. UP to 3,600 ppm TPHG and 5.7 ppm benzene was left in place. The area of soil boring SB-21 (29.5' – TPHG: 550 ppm and benzene 13 ppm) was overexcavated to 31' bgs and was ND for TPHG and benzene.

November 1991 – January 1999 – Quarterly groundwater monitoring performed at site (no quarterly monitoring occurred during the period 10/97 through 12/98). Up to 7,900 ppb TPHG, 1,500 ppb benzene, 3.3 ppb MTBE, and 11 ppb EDC were detected in groundwater at this site. Decreasing concentration trends were observed in MW-3 (monitoring well with highest historical concentrations) and increasing trends in low level BTEX concentrations were observed MW-1, MW-2, and MW-4 after the 1994 sampling events. However, screens in all monitoring wells were submerged by as much as 7' after 1995. Groundwater gradient

November 1999 – Soil borings G1 through G4 installed to 35' bgs. Up to 58 ppm TPHG and 0.63 ppm benzene was detected in soil at depths of up to 30' bgs. Grab groundwater samples were collected from all the borings to verify residual pollution concentrations. Up to 34,000 ppb TPHG and 810 ppb benzene remains in place in groundwater at this site. MTBE results were <300 ppb.

November 1999 – MW-1, MW-2, and MW-4 destroyed.

2000 – Risk Assessments with addendums performed for site. San Francisco Regional Water Quality Control Board (SF-RWQCB) concurs with risk assessment.


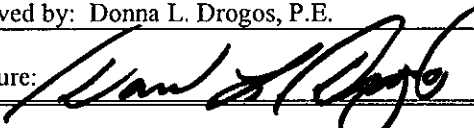
IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes No		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes No		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, it does not appear that the release would present a risk to human health.		
Site Management Requirements: Case closure for this fuel leak site granted for commercial land use of this property only. If a change in land use to residential or other conservative scenario occurs at this property, Alameda County Environmental Health must be notified and the case needs to be re-evaluated.		
Should corrective action be reviewed if land use changes? Yes		
Monitoring Wells Decommissioned: Yes	Number Decommissioned: 3	Number Retained: 1 (MW-3)
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: None		

V. ADDITIONAL COMMENTS, DATA, ETC.

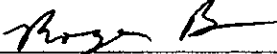
<p>Considerations and/or Variances:</p> <ul style="list-style-type: none"> • Location and /or use of 1, 358 cubic yards of petroleum contaminated soil is not reported. • Monitoring well screens submerged by up to 7 feet after 1995. However, confirmation grab groundwater samples were collected to verify residual pollution concentrations at this site. • Residual soil and groundwater pollution remains in place at this site. • Residual groundwater contamination plumes undefined. <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment under the current commercial land uses based upon the information available in our files to date. The source area (30'x30'x31'deep) was over-excavated. Residual pollution is expected to biodegrade over time. A risk assessment prepared for the site that was reviewed and approved by the San Francisco RWQCB, indicates that the site does not appear to pose a significant threat to the public under the current use.</p>

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Amir K.Gholami	Title: Hazardous Materials Specialist
Signature: 	Date: 8/26/02
Approved by: Donna L. Drogos, P.E.	Title: Supervising Hazardous Materials Specialist
Signature: 	Date: 08/26/02

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

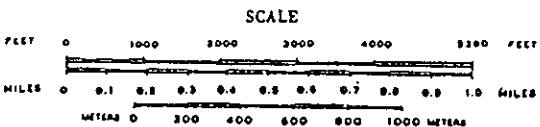
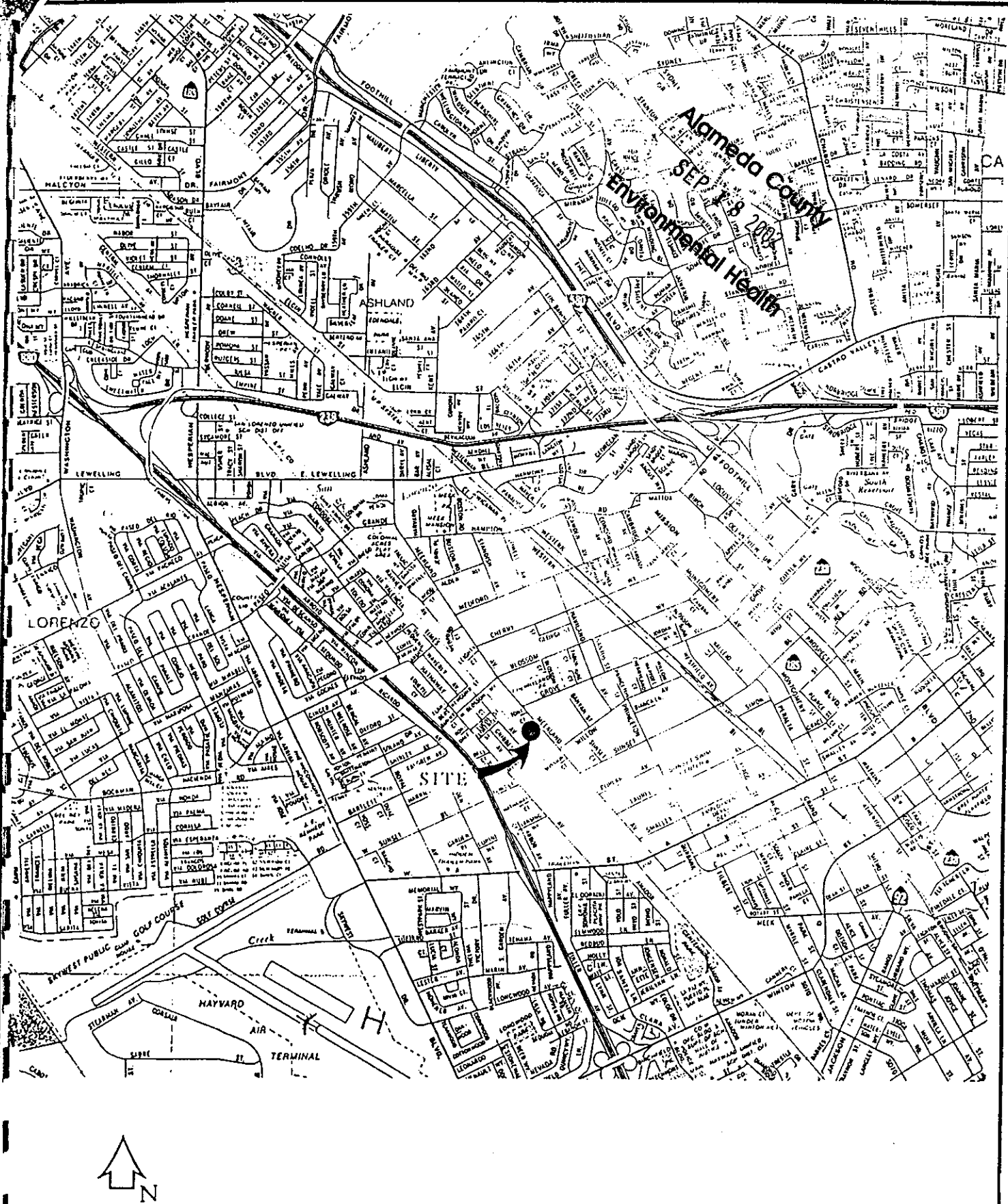
VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Roger Brewer	Title: Associate Engineering Geologist
RB Response: Concur, based solely upon information contained in this case closure summary.	Date Submitted to RB: 8/26/02
Signature: 	Date: 9/12/02

Attachments:

- 1 Site Vicinity Map
- 2 UST Removal Soil Sample Location Map
- 3 UST Removal Soil Analytical Results
- 4 Monitoring Well and Soil Boring Location Map
- 5 Soil Analytical Results – Monitoring Wells and Soil Borings
- 6 Monitoring Well Analytical Results, 3 pages
- 7 Depth to Water Measurements, 2 pages
- 8 11/91 Overexcavation Sampling Map
- 9 11/91 Overexcavation Soil Analytical Results
- 10 01/92 Overexcavation Sampling Map & Soil Analytical Results
- 11 1991/1992 Overexcavation Cross-Section
- 12 Soil Boring Location Map
- 13 Soil and Water Analytical Results – Soil Borings
- 14 11/94 Overexcavation Sampling Map
- 15 11/94 Overexcavation Soil Analytical Results
- 16 Monitoring Well and Soil Boring Location Map
- 17 Soil Analytical Results – Monitoring Well and Soil Borings
- 18 Geoprobe Location Map
- 19 Geoprobe Soil and Water Analytical Results
- 20 Monitoring Well Construction, 2 pages
- 21 Monitoring Well Boring Logs, 5 pages
- 22 Cross-Sections

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

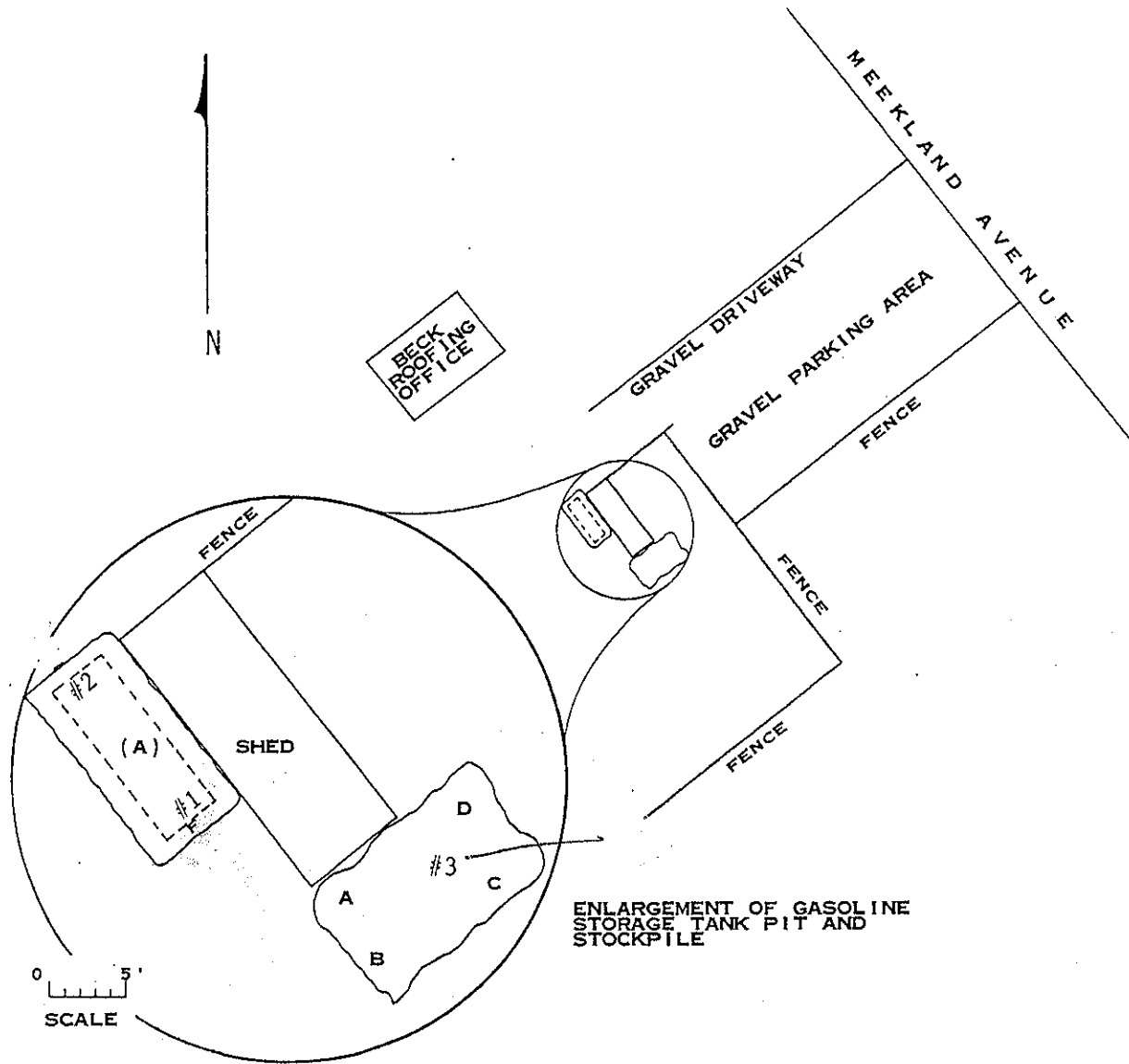


Source: CSAA Map of Hayward, San Leandro, Union City, 3/92

Beck Roofing, Hayward, CA Soil Sampling
FIGURE 1 Site Location



HEILSHORN ENVIRONMENTAL ENGINEERING
 P.O. Box 20546, El Sobrante, CA
 (510) 222-7968 Fax (510) 222-8573
 Rev. 0
 Date: 10/6/97



SCALE: 0 60'

MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 58 B-5

LEGEND: F = FILL PIPE END

- #1 SOIL SAMPLE FROM 8.0'
ANALYSIS FOR TOTAL PETRO-
LEUM HYDROCARBONS (TPH) AS
GASOLINE, BENZENE, TOLUENE,
XYLENES AND ETHYLBENZENE
(BTXE) AND TOTAL ORGANIC
LEAD
AT SEQUOIA ANALYTICAL LAB-
ORATORY
SEQUOIA LAB NO. 105-2697
- #2 SOIL SAMPLE FROM 7.5'
ANALYSIS FOR TPH AS GASOLINE,
BTXE AND TOTAL ORGANIC LEAD.
SEQUOIA LAB NO. 105-2698
- #3A-D STOCKPILE SOIL COMPOSITE AT
SAMPLE POINTS A-D
ANALYSIS FOR TPH AS GASOLINE,
BTXE AND TOTAL ORGANIC LEAD.
SEQUOIA LAB NO. 105-2699

SAMPLING PERFORMED BY GLEN BENETT
DIAGRAM PREPARED BY LI PAN



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Blaine Tech Services
1370 Tully Rd., Suite 505
San Jose, CA 95122
Attention: Richard Blaine

Client Project ID: 910520-C-1, R.L. Stevens
Matrix Descript: Soil
Analysis Method: EPA 5030/8015/8020
First Sample #: 105-2697

Sampled: May 20, 1991
Received: May 20, 1991
Analyzed: May 28, 1991
Reported: Jun 3, 1991

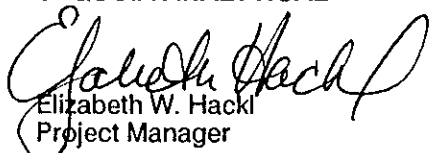
TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl Benzene	Xylenes
		Hydrocarbons mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
105-2697	#1	1,300	6.4	77	28	230
105-2698	#2	1,800	5.8	75	33	210
105-2699	#3 A-D	11	N.D.	N.D.	N.D.	N.D.

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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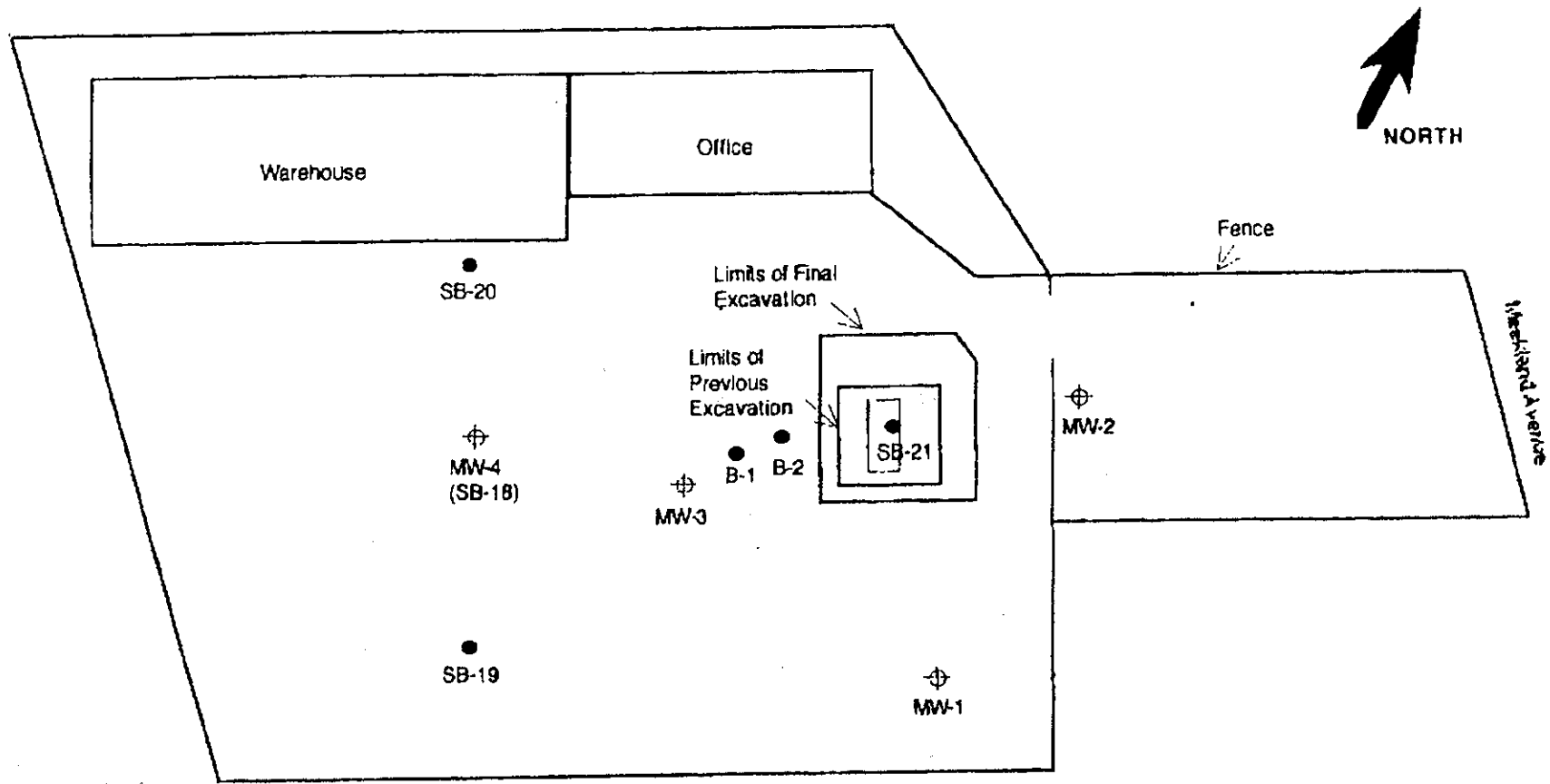
Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL





Elizabeth W. Hackl
Project Manager

1052697.BLA <1>

Attachment 3



LEGEND

-  Former Underground Tank Location
-  Monitoring Well
-  Soil Borings

Beck Roofing Company, Hayward, CA
FIGURE 2 Site Plan Pre 1999

	HEILSHORN ENVIRONMENTAL ENGINEERING	Rev. 3
	P.O. Box 20546, El Sobrante, CA	Date: 11/29/99
	(510) 222-7968 Fax (510) 222-8573	

Source: Adapted from Lush Geosciences, Inc.,
 Quarterly Monitoring Report, Figure 2, March 8, 1997

TABLE B2 SUMMARY OF SOIL DATA -- SOIL AND MONITORING WELL BORINGS

Date	Location	Depth Ft, bgs	TPHg ppm	Benzene ppb	Toluene ppb	Ethyl-benzene ppb	Xylenes ppb	Lead ppm
10/91	MW-1	5	ND	ND	16	ND	14	ND
		10	ND	ND	10	ND	7	ND
		15	ND	ND	13	ND	7	ND
		20	ND	ND	10	ND	6	ND
		25	ND	ND	24	ND	7	ND
		30	ND	ND	11	ND	6	5.00
		35	ND	ND	10	ND	6	5.50
		40	ND	ND	16	ND	6	ND
		45	ND	ND	15	ND	6	4.3
10/91	MW-2	5	ND	ND	ND	ND	ND	ND
		10	ND	ND	ND	ND	ND	ND
		15	ND	ND	ND	ND	ND	ND
		20	ND	ND	ND	ND	ND	5.90
		25	1.4	100	85	14	90	ND
		30	ND	44	8	ND	ND	ND
		35	ND	6	ND	ND	ND	4.20
10/91	B-1	5	ND	ND	17	ND	ND	ND
		10	ND	ND	11	ND	ND	ND
		15	ND	ND	12	ND	ND	ND
		20	5.7	250	600	100	570	5.82
		25	8.8	140	600	126	760	4.20
	B-2	5	ND	ND	18	ND	ND	ND
		10	ND	ND	13	ND	6	4.00
		15	ND	ND	6	ND	ND	ND
		20	ND	46	11	14	40	ND
		25	35	440	1200	320	1800	ND
		30	36	270	87	37	2.1	ND

TABLE B2 SUMMARY OF SOIL DATA -- SOIL AND MONITORING WELL BORINGS (continued)

Date	Location	Depth Ft, bgs	TPHg	Benzene	Toluene	Ethyl-benzene	Xylenes	Lead
	MW-3	5	1	ND	18	ND	ND	ND
		10	ND	ND	ND	ND	ND	3.60
		15	ND	ND	28	ND	ND	3.60
		20	2.9	21	17	6	25	5.80
		25	6.2	48	22	12	56	ND
		30	9.8	250	15	48	260	3.90
		35	ND	ND	14	ND	ND	3.75
7/94	SB18 (MW-4)	25.5-35.5	ND	ND	ND	ND	ND	NA
	SB19 North of MW4	25.5-35.5	ND	ND	ND	ND	ND	NA
	SB20 South of MW-4	25.5-35.5	ND	ND	ND	ND	ND	NA
	SB21 (within the excavation area)	28.5	180	2200	8700	4800	22000	NA
	SB21 (within the excavation area)	29.0	430	11000	42000	14000	69000	NA
	SB21 (within the excavation area)	29.5	550	13000	64000	25000	120000	NA

Notes:
 BTEX units µg/kg (original analyses in mg/kg)
 TPHg and lead units, mg/kg
 ND Not detected above method detection limit
 NA Not analyzed

TABLE C1 GROUNDWATER ANALYTICAL RESULTS for M...

Date	TPHg mg/L	MtBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L
11/4/91	ND	NA	ND	ND	ND	ND
12/23/91	ND	NA	ND	ND	ND	ND
2/24/92	0.09	NA	0.4	1	ND	ND
6/16/92	ND	NA	0.5	ND	ND	ND
9/9/92	ND	NA	ND	ND	ND	ND
7/16/93	ND	NA	ND	ND	ND	ND
8/4/94	ND	NA	ND	ND	ND	ND
10/25/94	ND	NA	ND	ND	ND	ND
1/20/95	ND	NA	ND	ND	ND	ND
4/11/95	ND	NA	ND	ND	ND	ND
7/13/95	WELL	INACCESSIBLE				
10/10/95	ND	NA	ND	ND	ND	ND
1/11/96	ND	NA	ND	ND	ND	1.2
4/23/96	0.53	NA	ND	0.64	ND	0.82
7/30/96	ND	NA	1.3	2.1	0.64	3.0
11/5/96	0.139	NA	2.2	7.3	2.2	23.1
2/7/97	0.081	NA	2.0	3.9	2.3	9.2
9/19/97	ND	ND	ND	ND	ND	ND
1/29/99	ND	ND	ND	ND	ND	ND
MCL, µg/L	None		1 (TCLP = 500)	150	700	1,750

Notes:

ND = less than laboratory minimum detection limits, 1994-2/97 limits are <0.05 mg/L - TPHg, and <0.3 µg/L - BTEX (<0.5 for xylene on 8/4/94) for tables 2-1 through 2-4.

NA = Not analyzed

mg/L = milligram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per million.

µg/L = microgram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per billion.

MCL = Maximum Contaminant Limit for public drinking water supplies, California Code of Regulations (CCR), Title 22 section 64444.

TCLP = Toxicity Characteristic Limit per CCR Title 22 Section 66261.24. TCLP values are used to determine the level of a constituent which renders a waste hazardous under federal and state laws.

TABLE C2 GROUNDWATER ANALYTICAL RESULTS for M...

Date	TPHg mg/L	MtBE µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L
11/4/91	ND	NA	ND	ND	ND	ND
12/23/91	ND	NA	ND	ND	ND	ND
2/24/92	0.33	NA	110	2	ND	0.9
6/16/92	ND	NA	7.7	ND	ND	ND
9/9/92	ND	NA	2.8	ND	ND	ND
7/16/93	ND	NA	2.0	ND	ND	ND
8/4/94	ND	NA	ND	ND	ND	ND
10/25/94	ND	NA	ND	ND	ND	ND
1/20/95	ND	NA	1.0	ND	ND	ND
4/11/95	ND	NA	1.2	ND	ND	ND
7/13/95	ND	NA	ND	ND	ND	ND
10/10/95	ND	NA	0.69	ND	ND	52
1/11/96	ND	NA	ND	ND	ND	0.67
4/23/96	0.039	NA	0.29	0.68	ND	0.66
7/30/96	ND	NA	3.4	5.6	1.7	9.3
11/5/96	0.292	NA	9.3	29.3	5.7	57
2/7/97	0.092	NA	2.8	5.0	3.7	9.4
9/19/97	ND	ND	ND	ND	ND	ND
1/29/99	ND	ND	ND	ND	ND	ND
MCL, µg/L	None		1 (TCLP = 500)	150	700	1,750

Notes:

ND = less than laboratory minimum detection limits, 1994-2/97 limits are <0.05 mg/L - TPHg, and <0.3 µg/L - BTEX (<0.5 for xylene on 8/4/94) for tables 2-1 through 2-4.

NA = Not analyzed

mg/L = milligram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per million.

µg/L = microgram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per billion.

MCL = Maximum Contaminant Limit for public drinking water supplies, California Code of Regulations (CCR), Title 22 section 64444.

TCLP = Toxicity Characteristic Limit per CCR Title 22 Section 66261.24. TCLP values are used to determine the level of a constituent which renders a waste hazardous under federal and state laws.

TABLE C3 GROUNDWATER ANALYTICAL RESULTS for [REDACTED]

Date	[REDACTED] $\mu\text{g/L}$	[REDACTED] $\mu\text{g/L}$	Toluene $\mu\text{g/L}$	Ethylbenzene $\mu\text{g/L}$	Total Xylenes $\mu\text{g/L}$	
11/4/91	ND	NA	ND	ND	ND	
12/23/91	0.15	NA	60	0.5	0.6	
2/24/92	4.36	NA	710	16	69	
6/16/92	4.9	NA	770	ND	61	
9/9/92	7.4	NA	1,200	7.7	95	
7/16/93	7.9	NA	1,500	11	340	
8/4/94	4.2	NA	450	ND	180	
10/25/94	ND	NA	ND	ND	ND	
1/20/95	4.4	NA	580	2	130	
4/11/95	1.8	NA	88	1.4	33	
7/13/95	3.4	NA	500	ND	130	
10/10/95	4.2	NA	360	2.4	190	
1/11/96	ND	NA	ND	ND	ND	
4/23/96	0.079	NA	1.2	0.33	0.45	
7/30/96	3.8	NA	240	8.2	14	
11/5/96	3.09	NA	242	36	70	
2/7/97	0.473	NA	36.3	1	10.7	
9/19/97	2.7	ND	160	0.65	93	
1/29/99	0.230	ND	6.2	ND	7.3	
7/21/99	[REDACTED]	ND	[REDACTED]	[REDACTED]	[REDACTED]	
MCL, $\mu\text{g/L}$	None		1 (TCLP = 500)	150	700	1,750

Notes:
 ND = less than laboratory minimum detection limits, 1994-2/97 limits are <0.05 mg/L - TPHg, and <0.3 $\mu\text{g/L}$ - BTEX (<0.5 for xylene on 8/4/94) for tables 2-1 through 2-4.
 NA = Not analyzed
 mg/L = milligram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per million.
 $\mu\text{g/L}$ = microgram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per billion.
 MCL = Maximum Contaminant Limit for public drinking water supplies, California Code of Regulations (CCR), Title 22 section 64444.
 TCLP = Toxicity Characteristic Limit per CCR Title 22 Section 66261.24. TCLP values are used to determine the level of a constituent which renders a waste hazardous under federal and state laws.

TABLE C4 GROUNDWATER ANALYTICAL RESULTS for [REDACTED]

Date	TPHg mg/L	MtBE $\mu\text{g/L}$	Benzene $\mu\text{g/L}$	Toluene $\mu\text{g/L}$	Ethylbenzene $\mu\text{g/L}$	Total Xylenes $\mu\text{g/L}$
8/4/94	ND	NA	ND	ND	ND	ND
10/25/94	ND	NA	ND	ND	ND	ND
1/20/95	ND	NA	ND	ND	ND	ND
4/11/95	ND	NA	ND	ND	ND	ND
7/13/95	ND	NA	ND	ND	ND	ND
10/10/95	ND	NA	ND	ND	ND	ND
1/11/96	ND	NA	2.1	4	ND	0.79
4/23/96	0.043	NA	0.42	1.1	0.39	0.79
7/30/96	ND	NA	0.97	1.7	0.67	3
11/5/96	0.0901	NA	1.3	2.7	1.8	7.5
2/7/97	0.072	NA	1.3	2.7	1.8	7.5
9/19/97	ND	ND	ND	ND	ND	ND
1/29/99	ND	ND	ND	ND	ND	ND
[REDACTED]						
MCL, $\mu\text{g/L}$	None		1 (TCLP = 500)	150	700	1,750

Notes:
 ND = less than laboratory minimum detection limits, 1994-2/97 limits are <0.05 mg/L - TPHg, and <0.3 $\mu\text{g/L}$ - BTEX (<0.5 for xylene on 8/4/94) for tables 2-1 through 2-4.
 NA = Not analyzed
 mg/L = milligram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per million.
 $\mu\text{g/L}$ = microgram of compound per liter of liquid matrix (usually water). Roughly equivalent to parts per billion.
 MCL = Maximum Contaminant Limit for public drinking water supplies, California Code of Regulations (CCR), Title 22 section 64444.
 TCLP = Toxicity Characteristic Limit per CCR Title 22 Section 66261.24. TCLP values are used to determine the level of a constituent which renders a waste hazardous under federal and state laws.

TABLE D1 JANUARY 1999 GROUNDWATER ANALYTICAL REPORTS

Constituent Analyzed	MW-1 ✓	MW-2 ✓	MW-3 ✓	MW-4 ✓	Reporting Limit, $\mu\text{g/L}$
TPHg	ND	ND	230	ND	50
Benzene	ND	ND	6.2	ND	0.5
Toluene	ND	ND	ND	ND	0.5
Ethylbenzene	ND	ND	7.3	ND	0.5
Xylenes	ND	ND	ND	ND	0.5
Di-isopropyl Ether (DIPE)	ND	ND	ND	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	ND	ND	ND	1.0
Methyl tert-Butyl Ether (MTBE)	ND	ND	3.3	ND	1.0
tert-Amy Methyl Ether (TAME)	ND	ND	ND	ND	1.0
tert Butanol	ND	ND	ND	ND	5.0
Ethylene Dibromide (EDB)	ND	ND	ND	ND	1.0
1,2-Dichloroethane (1,2-DCA) also called Ethylene Dichloride (EDC)	ND	ND	11	ND	1.0

Units: $\mu\text{g/L}$

TABLE 2 GROUNDWATER ELEVATION DATA

WELL	SAMPLE DATE	TOP OF CASING	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
MW-1	11/04/91	100.01	32.32	67.69
MW-1	12/23/91	100.01	32.54	67.47
MW-1	01/22/92	100.01	32.08	67.93
MW-1	02/24/92	100.01	37.26	62.75
MW-1	06/16/92	100.01	30.31	69.7
MW-1	07/15/92	100.01	30.76	69.25
MW-1	07/28/92	100.01	30.98	69.03
MW-1	08/13/92	100.01	31.23	68.78
MW-1	09/09/92	100.01	31.65	68.36

TABLE 2 GROUNDWATER ELEVATION DATA (continued)

WELL	SAMPLE DATE	TOP OF CASING	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION
MW-3	11/04/91	100.00	32.40	67.60
MW-3	12/23/91	100.00	32.60	67.40
MW-3	01/22/92	100.00	32.14	67.86
MW-3	02/24/92	100.00	29.90	70.10
MW-3	06/16/92	100.00	30.25	69.75
MW-3	07/15/92	100.00	30.70	69.30
MW-3	07/28/92	100.00	30.97	69.03
MW-3	08/13/92	100.00	31.22	68.78
MW-3	09/09/92	100.00	31.95	68.05

All Groundwater Levels in Feet (ft)

WELL	SAMPLE DATE	TOP OF CASING	DEPTH TO GROUNDWATER	GROUND ELEVATION
MW-2	11/04/91	100.13	32.44	67.69
MW-2	12/23/91	100.13	32.64	67.49
MW-2	01/22/92	100.13	32.19	67.94
MW-2	02/24/92	100.13	32.00	68.13
MW-2	06/16/92	100.13	30.42	69.71
MW-2	07/15/92	100.13	30.90	69.23
MW-2	07/28/92	100.13	31.12	69.01
MW-2	08/13/92	100.13	31.26	68.87
MW-2	09/09/92	100.13	31.80	68.33

All Groundwater Levels in Feet (ft)

TABLE 3
GROUNDWATER ELEVATION DATA
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA

Page 1 of 3

Well Number	Elevation of Top of Casing (ft. above MSL)	Depth to Water (ft. below top of casing)	Water-level Elevation (ft. above MSL)	Gradient and Direction
8/4/94				
MW1	58.55	29.96	29.29	
MW2	58.65	29.35	29.30	
MW3	58.52	29.27	29.25	
MW4	58.01	28.80	29.21	
10/25/94				
MW1	58.55	30.10	28.45	
MW2	58.65	30.15	28.50	0.0009 ft/ft
MW3	58.52	30.10	28.42	S22°W
MW4	58.01	29.60	28.41	
1/20/95				
MW1	58.55	26.57	31.98	
MW2	58.65	26.65	32.00	0.0002 ft/ft
MW3	58.52	26.54	31.98	S0°W
MW4	58.01	26.03	31.98	
4/11/95				
MW1	58.55	23.87	34.68	
MW2	58.65	23.92	34.73	0.0009 ft/ft
MW3	58.52	23.87	34.65	S24°W
MW4	58.01	23.38	34.63	
5/09/95				
MW2	58.55	24.65	33.90	
MW2	58.65	24.735	33.915	0.00125 ft/ft
MW3	58.52	24.66	33.86	S65°W
MW4	58.01	24.20	33.81	
6/09/95				
MW1	58.55	25.39	33.16	
MW2	58.65	25.47	33.18	0.0008 ft/ft
MW3	58.52	25.40	33.12	S59°W
MW4	58.01	24.92	33.10	

Continued on Next Page

TOC = Top of the well casing (elevation in ft. above mean sea level- AMSL)
Gradient = groundwater gradient in ft per ft
Direction = groundwater flow direction

TABLE 3
GROUNDWATER ELEVATION DATA
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA

Page 2 of 3

Well Number	Elevation of Top of Casing (ft. above MSL)	Depth to Water (ft. below top of casing)	Water-level Elevation (ft. above MSL)	Gradient and Direction
7/13/95				
MW1	58.55	INACCESSIBLE		
MW2	58.65	26.0	32.65	
MW3	58.52	25.95	32.57	
MW4	58.01	25.5	32.51	
8/10/95				
MW1	58.55	26.33	32.16	
MW2	58.65	26.48	32.17	
MW3	58.52	26.43	32.09	
MW4	58.01	25.97	32.04	
9/14/95				
MW1	58.55	26.84	31.71	
MW2	58.65	26.92	31.73	
MW3	58.52	26.87	31.65	
MW4	58.01	26.42	31.30	
10/10/95				
MW1	58.55	27.18	31.37	
MW2	58.65	27.27	31.38	
MW3	58.52	27.22	31.30	
MW4	58.01	26.76	31.25	
11/7/95				
MW1	58.55	27.52	31.03	
MW2	58.65	27.60	31.05	0.001 ft/ft
MW3	58.52	27.55	30.97	S65°W
MW4	58.01	27.08	30.93	
12/6/95				
MW1	58.55	27.80	30.75	
MW2	58.65	27.88	30.77	0.001 ft/ft
MW3	58.52	27.83	30.65	S63°W
MW4	58.01	27.37	30.64	

TOC = Top of the well casing (elevation in ft. above mean sea level- AMSL)
Gradient = groundwater gradient in ft per ft
Direction = groundwater flow direction

TABLE 3
GROUNDWATER ELEVATION DATA
BECK ROOFING FACILITY
HAYWARD, CALIFORNIA
Page 3 of 3

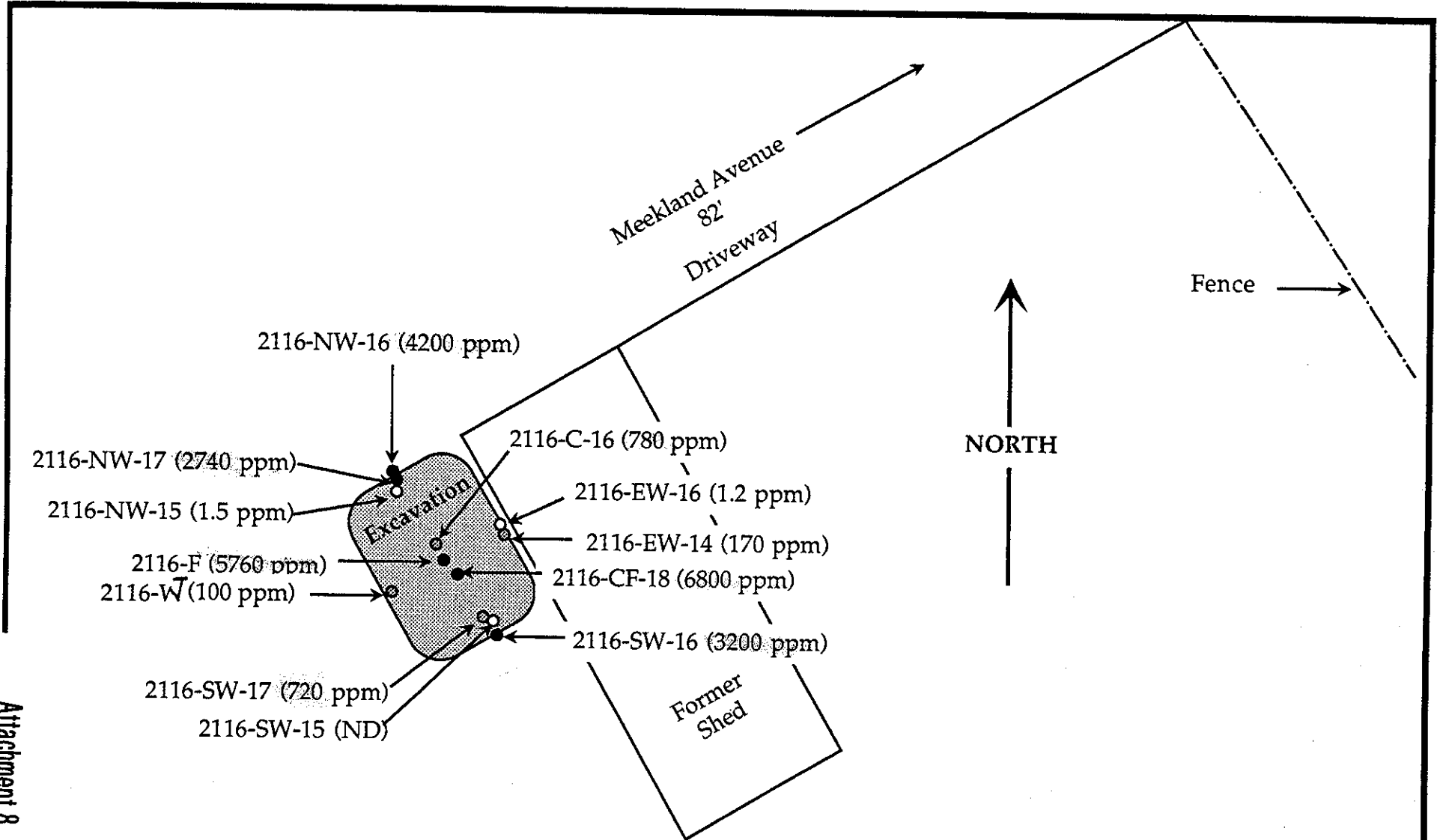
Well Number	Elevation of Top of Casing (ft. above MSL)	Depth to Water (ft. below top of casing)	Water-level Elevation (ft. above MSL)	Gradient and Direction
1/11/96				
MW1	58.55	26.76	31.79	
MW2	58.65	26.84	31.81	0.001 ft/ft
MW3	58.52	26.77	31.75	S67°W
MW4	58.01	26.30	31.71	
2/7/96				
MW1	58.55	24.24	34.31	
MW2	58.65	24.32	34.33	0.0007 ft/ft
MW3	58.52	24.26	34.26	S57°W
MW4	58.01	23.76	34.25	
4/23/96				
MW1	58.55	23.02	35.53	
MW2	58.65	23.09	35.56	0.0014 ft/ft
MW3	58.52	23.06	35.46	S63°W
MW4	58.01	22.60	35.41	
7/30/96				
MW1	58.55	25.18	33.37	
MW2	58.65	25.25	33.40	0.0015 ft/ft
MW3	58.52	25.23	33.29	S69°W
MW4	58.01	24.79	33.22	
11/5/96				
MW1	58.55	26.69	31.86	
MW2	58.65	26.76	31.89	0.0012
MW3	58.52	26.72	31.80	S66°W
MW4	58.01	26.27	31.74	
2/5/97				
MW1	58.55	21.62	36.93	
MW2	58.65	21.68	36.97	0.0011
MW3	58.52	21.66	36.86	S65°W
MW4	58.01	21.20	36.81	

TOC = Top of the well casing (elevation in ft. above mean sea level- AMSL)
Gradient = groundwater gradient in ft per ft
Direction = groundwater flow direction

TABLE 4 SUMMARY OF JANUARY 1999 FIELD DATA

Well	Well Depth feet, bgs	Initial Depth to Water ft bgs	Volume of Water Purged Gal.	Average Temperature °F	Average Conductivity µmhos	Average pH*
MW-1	37.0	24.2	7	51	850	7.9
MW-2	37.0	24.3	8	53	840	8.0
MW-3	34.6	24.2	5.5	58	867	9.0
MW-4	39.1	23.8	9	60	888	10.1

* pH meter was difficult to calibrate. Values should be viewed as relative, not absolute.



Scale 1"=10"

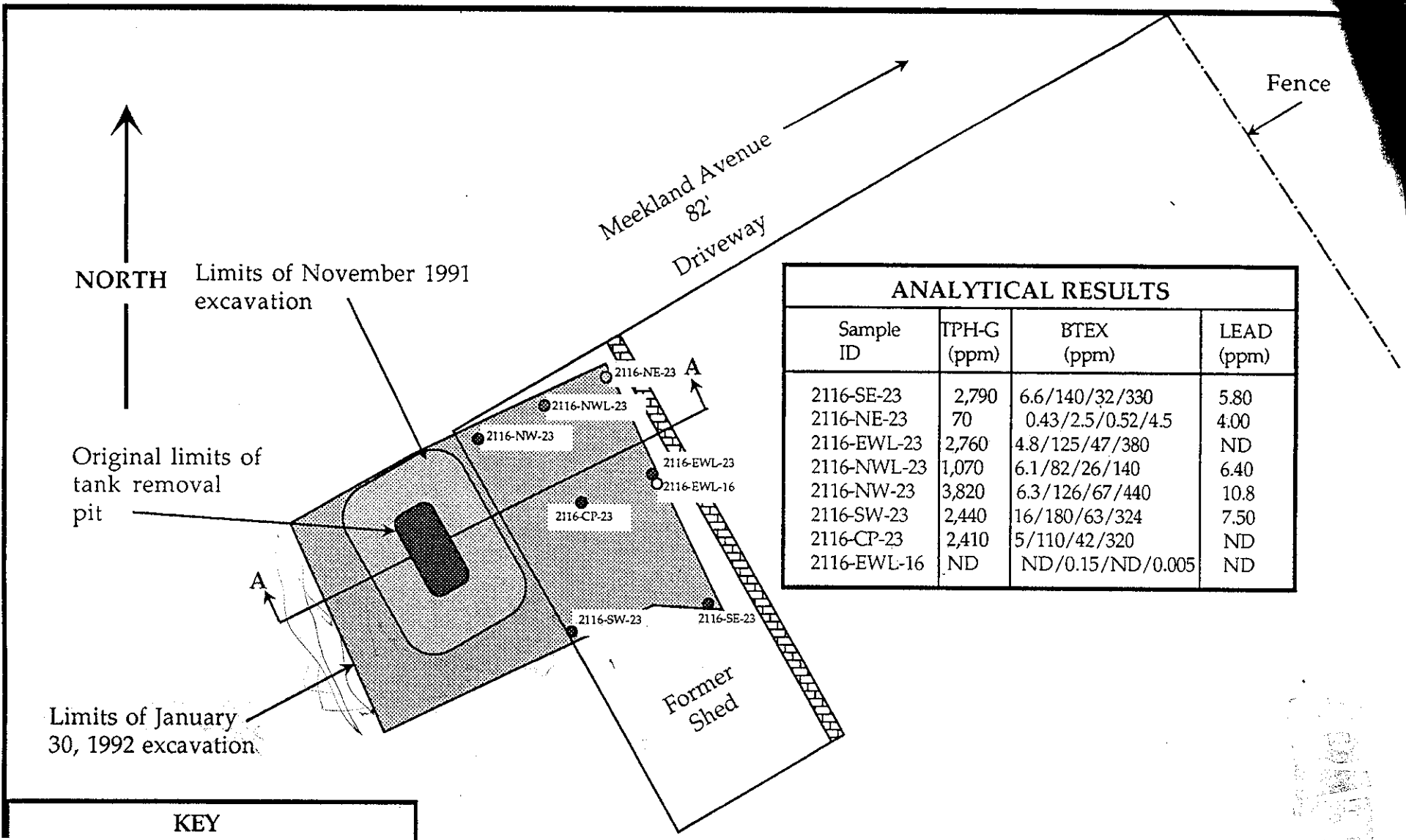
- 0 to 99 ppm TPH as Gasoline
- 100 to 999 ppm TPH as Gasoline
- Greater than 999 ppm TPH as Gasoline

L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California		Sample Location Plan Beck Roofing Hayward, California	
Project Number: 2116	Drawn by MJK	Date: December, 1991	Figure Num

TABLE B1 SUMMARY OF SOIL DATA – TANK REMOVAL AND OVER EXCAVATION PITS

Date	Location	Depth Ft,bgs	TPHg mg/kg	Benzene μg/kg	Toluene μg/kg	Ethyl-benzene μg/kg	Xylenes μg/kg	Lead mg/kg
Tank Removal		Pit	Sidewall	Samples	(Blaine per	L&W 92)		(Organic)
5/20/91	Tank pit fill end	8	1,300	6400	7700	0800	230000	0.22
	Tank pit opposite fill end	7.5	1800	5800	75000	33000	210000	0.66
Tank Pit	Over Excavation	Sidewal	Samples	(L&W	92)			(Total)
11/91	North wall	15	1.5	0008	50	16	210	
	North wall	16	4200	6300	240000	1000000	550000	11
	North wall	17	2740	16000	240000	120000	650000	ND
	Floor, center	16	780	0830	1500	6300	48000	NT
	Center Floor	17	5760	30000	450000	230000	1270000	7.25
	Center floor	18	6800	4000	440000	140000	770000	12.2
	South wall	15	ND	11	71	15	87	8.3
	South wall	16	3200	1800	100000	60000	350000	8.4
	South wall	17	720	400	13000	8400	90000	9.35
	East wall	14	170	ND	2700	1500	10000	NT
	East Wall	16	1.2	ND	40	8	48	ND
	West Wall	16	1.0	ND	9	ND	29	4.0

Notes:
 BTEX units mg/kg (original analyses in mg/kg)
 TPHg and lead units, mg/kg
 ND Not detected above method detection limit
 NT Not tested



KEY

- Scale 1"=10"
- Non-detect
 - ◐ 0 to 1000 ppm TPH-G
 - ◑ 1000 to 2000 ppm TPH-G
 - Greater than 2000 ppm TPH-G

L & W Environmental Services, Inc.
 2111 Jennings Street
 San Francisco, California

Sample Location Plan
 January 30, 1992 Excavation
 Beck Roofing
 Hayward, California

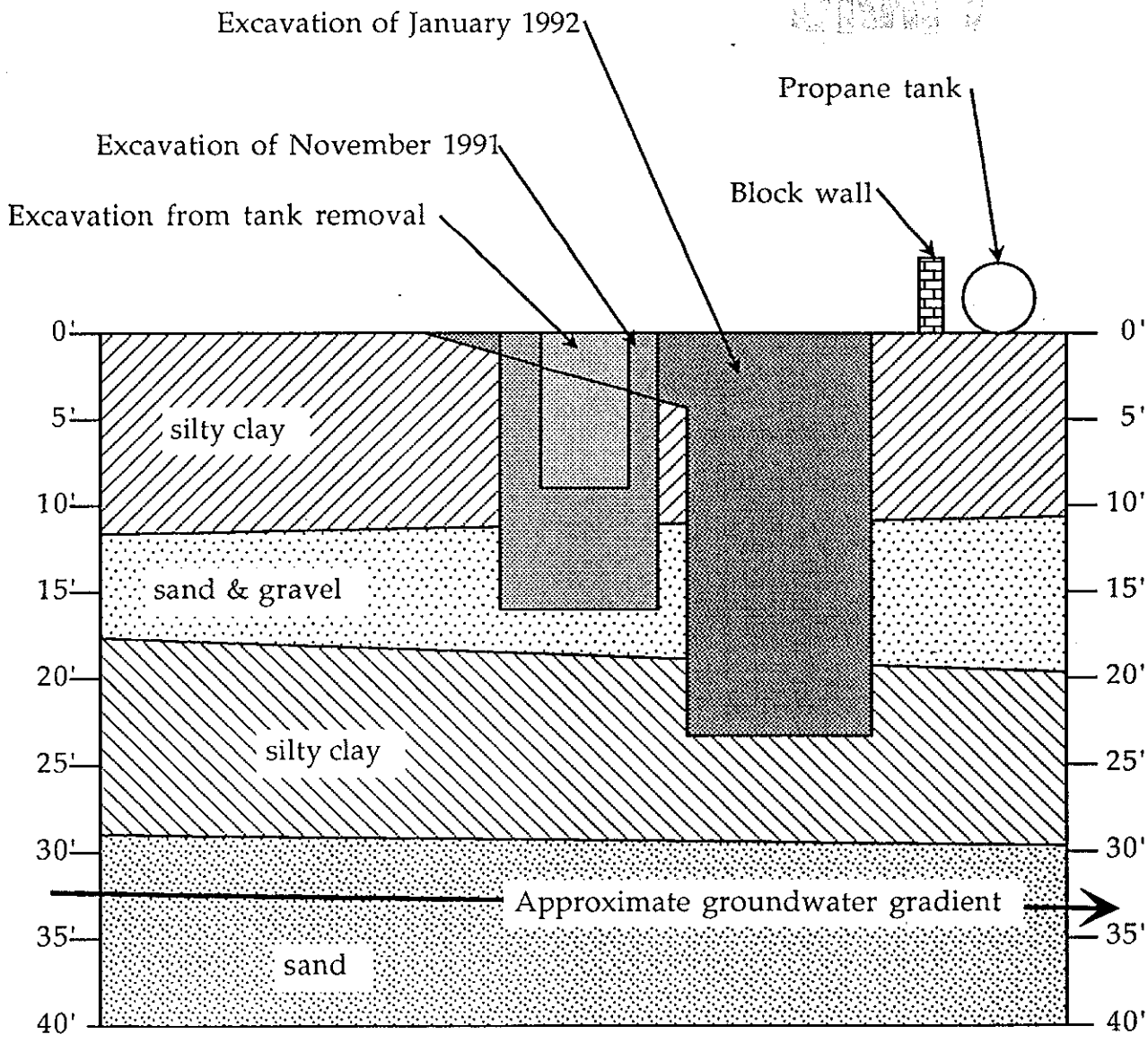
Project Number: 2116

Drawn by jnc

Date: March, 1992

Figure Number 3

Attachment 10



L & W Environmental Services, Inc.
 2111 Jennings Street
 San Francisco, California

Cross Section A-A
 Beck Roofing
 Hayward, California

Project Number: 2116

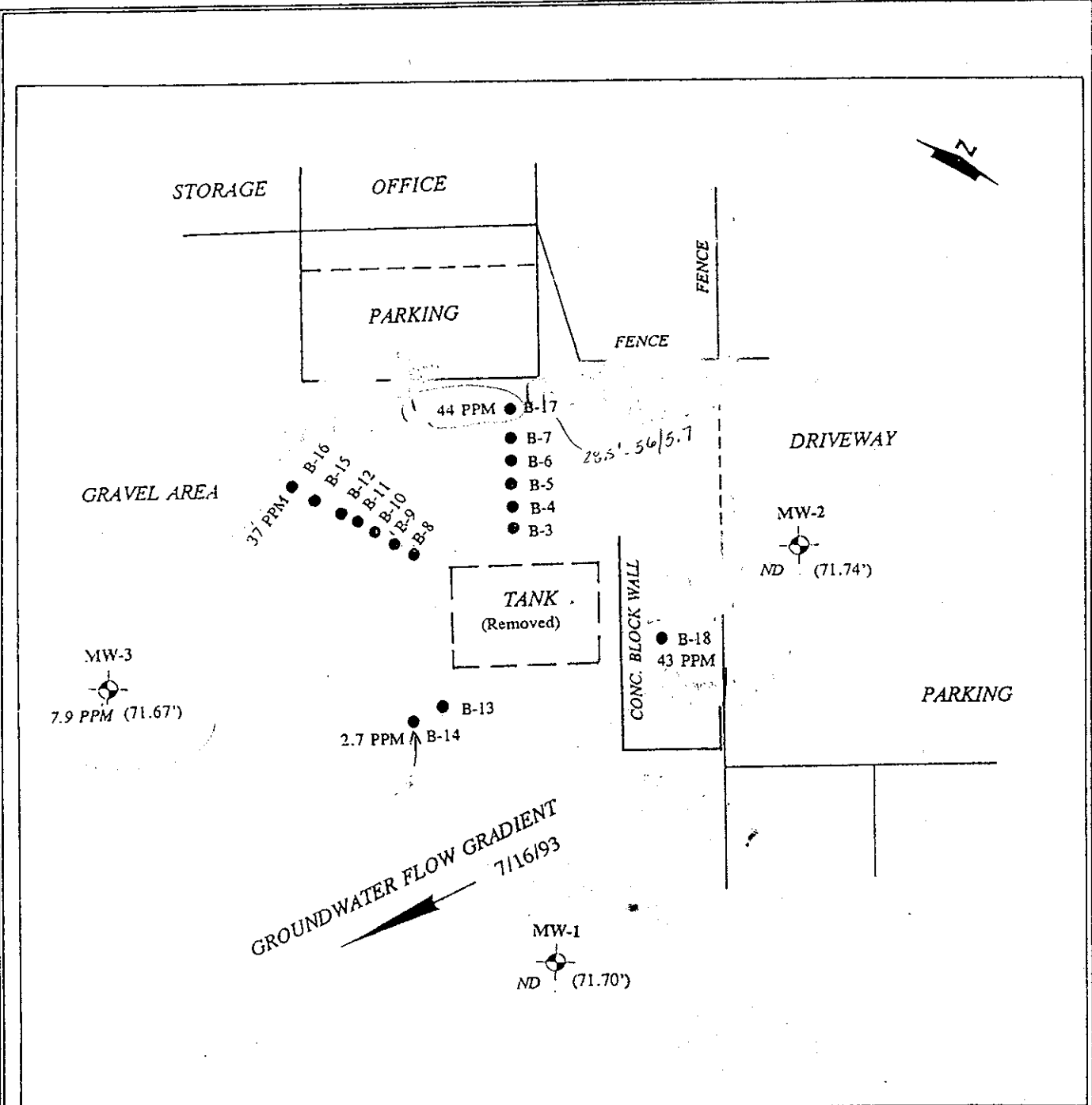
Drawn by: JNC

Scale 1" = 10'

Date: March, 1992



Figure Number: 6

JOB NO. 539.44 JOB NAME BECK ROOFING LOCATION HAYWARD, CA ENGR DRAWN BY LAR CHECKER DATE AUGUST 1993



SCALE: 1" = 20'

EXPLANATION

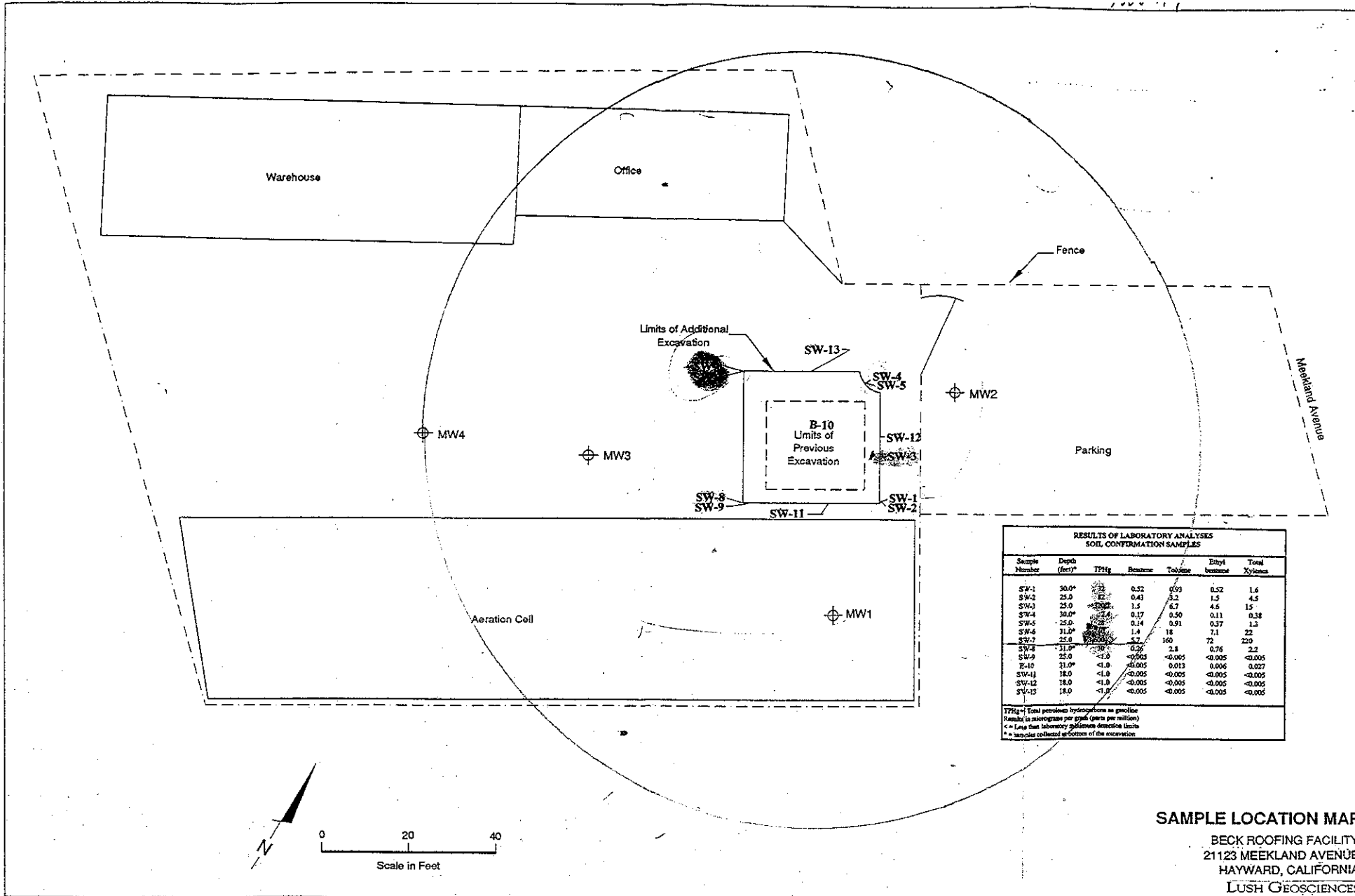
-  MW-3
7.9 PPM (71.67') Monitoring Well Location, showing TPH and (Water Elev.) on 7/16/93.
-  B-18
43 PPM Boring Location, July 1993, showing TPH in soil at 24'.

SITE PLAN

LOUIS A. RICHARDSON
Consulting Engineering Geologist
Mountain View, California

SUMMARY OF SOIL AND GROUNDWATER
SAMPLE RESULTS FOR TPH-GASOLINE AND BTEX

Soil Sample	Groundwater Sample	Visual or Noticeable Contamination	TPH-Gasoline (mg/kg) Soil (mg/L) Water	Benzene (ug/kg) Soil (ug/L) Water	Toluene (ug/kg) Soil (ug/L) Water	Ethyl Benzene (ug/kg) Soil (ug/L) Water	Xylene (ug/kg) Soil (ug/L) Water
B-3 @ 11.5'	X	yes					
B-4 @ 15'	X	yes					
B-5 @ 15'	X	yes					
B-6 @ 15'	X	yes					
B-7 @ 20'	X	yes					
B-8 @ 17'	X	yes					
B-9 @ 18'	X	yes					
B-10 @ 18'	X	yes					
B-11 @ 18'	X	yes					
B-12 @ 25'	X	yes					
B-13 @ 25'	X	yes					
B-14 @ 5'	X		ND	ND	ND	ND	ND
B-14 @ 10'	X		ND	ND	ND	ND	ND
B-14 @ 15'	X		ND	ND	ND	ND	ND
B-14 @ 19'	X		ND	10	4.2	4.4	5.5
B-14 @ 22'	X		2.7	320	550	120	540
B-14 @ 26'	X		23	330	780	160	760
B-14 @ 27'	X		4.1	390	770	420	2,200
B-14 @ 28.5'	X		91	7,800	11,000	3,200	16,000
B-15 @ 19'	X	yes					
B-16 @ 5'	X		ND	ND	ND	ND	ND
B-16 @ 10'	X		ND	ND	ND	ND	ND
B-16 @ 15'	X		ND	ND	ND	ND	ND
B-16 @ 23'	X		6.9	340	310	150	500
B-16 @ 24'	X		37	370	670	210	890
B-16 @ 26'	X		48	530	620	430	2,000
B-16 @ 28'	X		23	300	660	180	1,000
B-16 @ 29'	X		64	9,000	11,000	2,000	13,000
B-17 @ 5'	X		ND	ND	ND	ND	ND
B-17 @ 10'	X		ND	ND	ND	ND	ND
B-17 @ 15'	X		ND	ND	ND	ND	ND
B-17 @ 22'	X		2.4	54	59	43	180
B-17 @ 24'	X		44	80	530	330	1,400
B-17 @ 25.5'	X		170	1,200	8,200	4,000	22,000
B-17 @ 27'	X		11	380	1,200	160	970
B-17 @ 28.5'	X		56	5,700	5,700	1,500	11,000
B-18 @ 5'	X		ND	ND	ND	ND	ND
B-18 @ 10'	X		ND	ND	ND	ND	ND
B-18 @ 15'	X		ND	ND	ND	ND	ND
B-18 @ 23'	X		20	460	310	150	750
B-18 @ 24'	X		43	690	1,700	590	3,300
B-18 @ 26'	X		87	550	2,100	1,100	6,900
B-18 @ 28'	X		23	170	350	84	470
B-18 @ 28.5'	X		61	11,000	3,800	2,400	12,000



**RESULTS OF LABORATORY ANALYSES
SOIL CONFIRMATION SAMPLES**

Sample Number	Depth (feet)*	TPHs	Benzene	Toluene	Ethyl benzene	Total Xylenes
SW-1	30.0*	2.1	0.52	0.99	0.52	1.6
SW-2	25.0	12	0.43	3.2	1.5	4.5
SW-3	25.0	3000	1.5	6.7	4.6	15
SW-4	30.0*	2.1	0.17	0.50	0.11	0.38
SW-5	25.0	12	0.14	0.91	0.37	1.3
SW-6	11.0*	17	1.4	18	7.1	22
SW-7	25.0	3000	5.7	160	72	220
SW-8	31.0*	30	0.26	2.8	0.76	2.2
SW-9	25.0	<1.0	<0.005	<0.005	<0.005	<0.005
SW-10	11.0*	<1.0	<0.005	0.013	0.006	0.027
SW-11	18.0	<1.0	<0.005	<0.005	<0.005	<0.005
SW-12	18.0	<1.0	<0.005	<0.005	<0.005	<0.005
SW-13	18.0	<1.0	<0.005	<0.005	<0.005	<0.005

TPHs = Total petroleum hydrocarbons as gasoline
 Benzene in micrograms per gram (parts per million)
 * = Less than laboratory minimum detection limits
 # = Samples collected at bottom of the excavation

SAMPLE LOCATION MAP
 BECK ROOFING FACILITY
 21123 MEEKLAND AVENUE
 HAYWARD, CALIFORNIA
 LUSH GEOSCIENCES

FIGURE 2

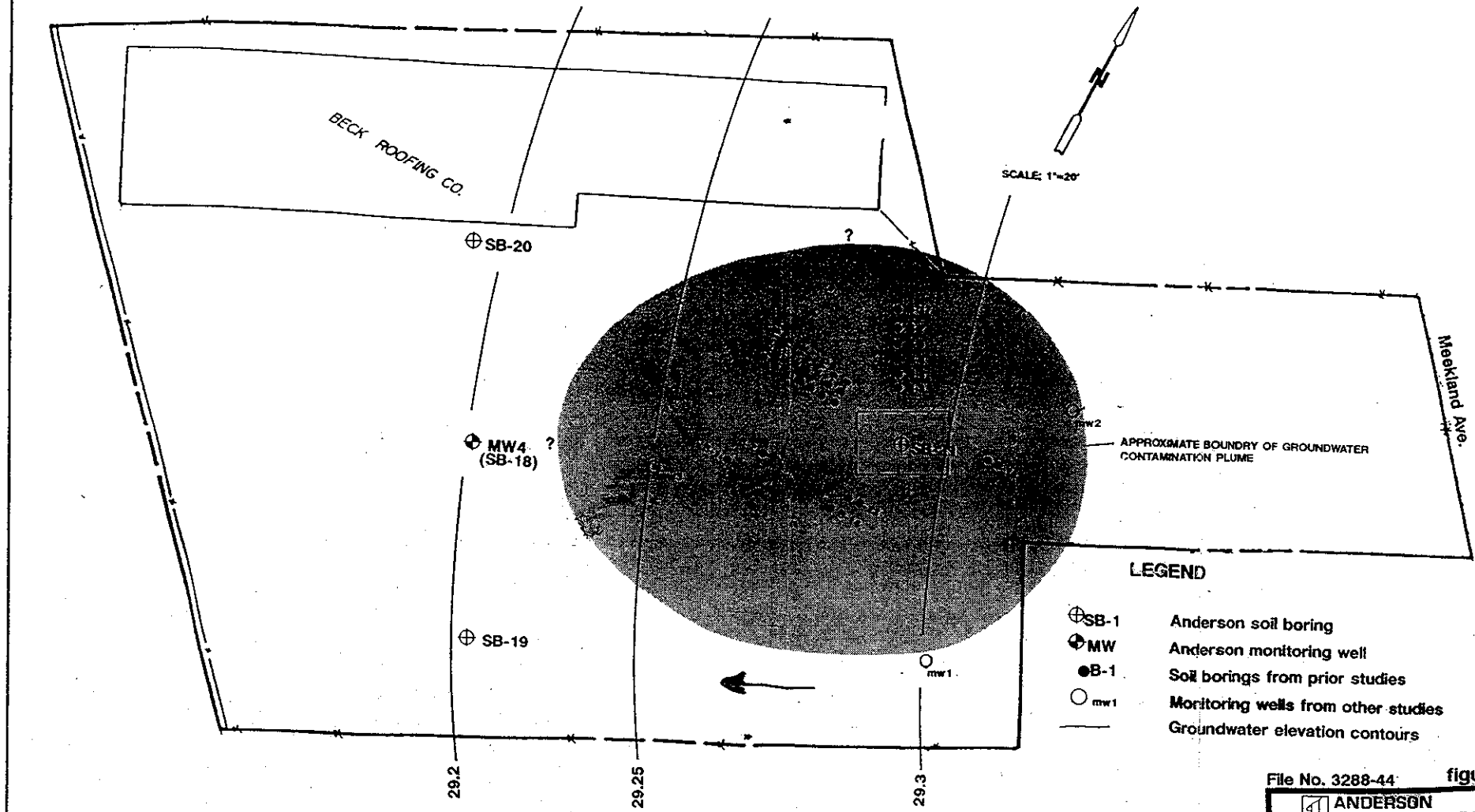
TABLE B1 SUMMARY OF SOIL DATA – TANK REMOVAL AND OVER EXCAVATION PITS (continued)

Date	Location	Depth Ft,bgs	TPHg mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylenes mg/kg	Lead mg/kg
Tank	Over excavation	Sidewall	Confirmation	Samples	(Latsch Geo 94)			(Not analyzed)
11/94	SW-1	30.0*	32	0.52	0.93	0.52	1.6	
	SW-2	25.0	82	0.43	3.2	1.5	4.5	
	SW-3	25.0	320	1.5	6.7	4.6	15	
	SW-4	30.0*	2.4	0.17	0.50	0.11	0.38	
	SW-5	25.0	28	0.14	0.91	0.37	1.3	
	SW-6	31.0	740	5.7	18	7.1	22	
	SW-7	25.0	3600	0.26	160	72	220	
	SW-8	31.0*	30	<0.005	2.8	0.76	2.2	
	SW-9	25.0	<1.0	<0.005	<0.005	<0.005	<0.005	
	B-10	31.0*	<1.0	<0.005	0.013	0.006	0.027	
	SW-11	18.0	<1.0	<0.005	<0.005	<0.005	<0.005	
	SW-12	18.0	<1.0	<0.005	<0.005	<0.005	<0.005	
	SW-13	18.0	<1.0	<0.005	<0.005	<0.005	<0.005	

Notes:

Results in parts per million (milligrams per kilogram)

* = Samples collected at bottom of the excavation



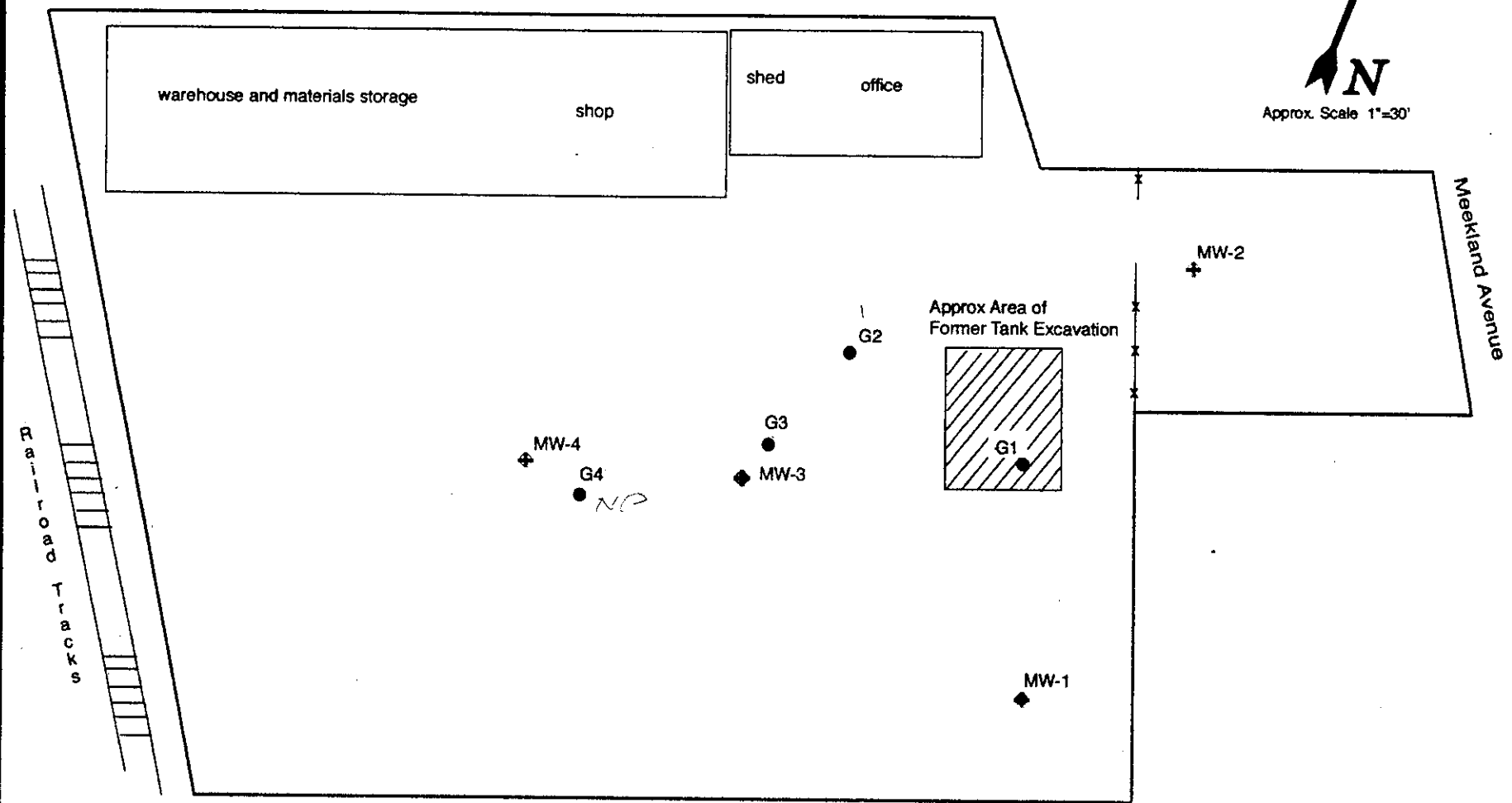
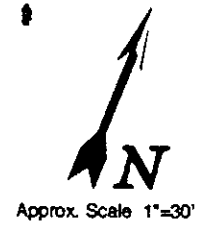
File No. 3288-44 figure 1
ANDERSON CONSULTING GROUP
 Roseville (916) 786-8883
 Grass Valley (916) 273-SOIL

TABLE 1
parts per million

Point	Depth(ft)	Gasoline	Benzene	Toluene	Ethylbnz	Xylenes
SB-18	25.5	ND	ND	ND	ND	ND
SB-18	31.0	ND	ND	ND	ND	ND
SB-18	35.5	ND	ND	ND	ND	ND
SB-19	30.5	ND	ND	ND	ND	ND
SB-19	35.5	ND	ND	ND	ND	ND
SB-20	25.5	ND	ND	ND	ND	ND
SB-20	30.5	ND	ND	ND	ND	ND
SB-20	35.5	ND	ND	ND	ND	ND
SB-21	28.5	180	2.2	8.7	4.8	22
SB-21	29.0	430	11	42	14	69
SB-21	29.5	550	13	64	25	120
SB-18	water	ND	ND	ND	ND	ND
SB-19	water	ND	ND	ND	ND	ND
SB-20	water	ND	ND	ND	ND	ND

ND = not detected (below detection limits)





LEGEND

- ⊕ Monitoring Well Destroyed 11/11/99
- ◆ Existing Monitoring Well
- Boring 11/8/99

Attachment 18



Heilshorn Environmental Engineering
 P.O. Box 20546 El Sobrante, CA 94820-0546
 ph 510-222-7968 fax 510-222-8573 edheilshorn@earthlink.net

BECK ROOFING COMPANY
 Figure 5 Site Plan November 1999

11/23/99
R1

Heilshorn Environmental Eng. P.O. Box 20546 El Sobrante, CA 94820	Client Project ID: Beck Roofing	Date Sampled: 11/08/99
		Date Received: 11/09/99
	Client Contact: Elyse Heilshorn	Date Extracted: 11/09-11/16/99
	Client P.O.:	Date Analyzed: 11/09-11/16/99

Heilshorn Environmental Eng. P.O. Box 20546 El Sobrante, CA 94820	Client Project ID: Beck Roofing	Date Sampled: 11/08/99
		Date Received: 11/09/99
	Client Contact: Elyse Heilshorn	Date Extracted: 11/18-11/22/99
	Client P.O.:	Date Analyzed: 11/18-11/22/99

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)*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
25231	G1-35	S	ND	ND	ND	ND	ND	ND	104
25232	G1-W	W	15,000,a	ND<50	810	17	1400	630	99
25235	G2-25	S	58,b	ND<0.10	0.12	0.075	1.0	2.0	108
25236	G2-30	S	7.9,a	ND	0.023	0.010	0.060	0.10	97
25237	G2-35	S	ND	ND	ND	ND	0.008	0.009	98
25238	G2-W	W	34,000,a	ND<300	780	ND<4	2200	2400	99
25241	G3-25	S	ND	ND	ND	ND	ND	ND	100
25242	G3-30	S	22,b,j	ND	0.063	ND	0.32	0.12	---
25243	G3-35	S	ND	ND	ND	ND	ND	ND	96
25244	G3-W	W	10,000,a	ND<100	110	1.9	370	51	119
25247	G4-25	S	ND	ND	ND	ND	ND	ND	97
25248	G4-30	S	ND	ND	ND	ND	ND	ND	102
25249	G4-35	S	ND	ND	ND	ND	ND	ND	92
25250	G4-W	W	ND	ND	ND	ND	ND	ND	100
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	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

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)*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
25230	G1-20	S	10,g	ND	0.007	0.014	0.068	0.039	93
25234	G2-20	S	ND	ND	ND	ND	ND	ND	100
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	0.5	
	S	1.0 mg/kg	0.05	0.005	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.

* 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

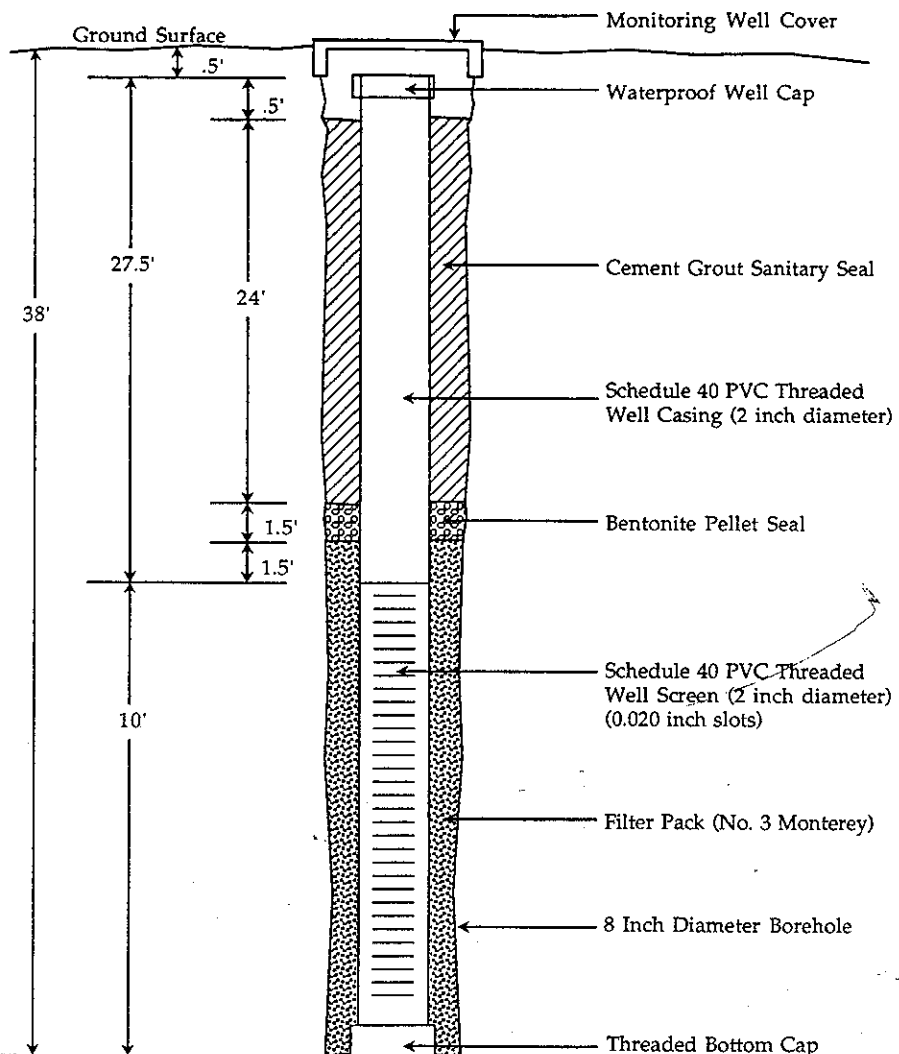
*The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (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.

DHS Certification No. 1644

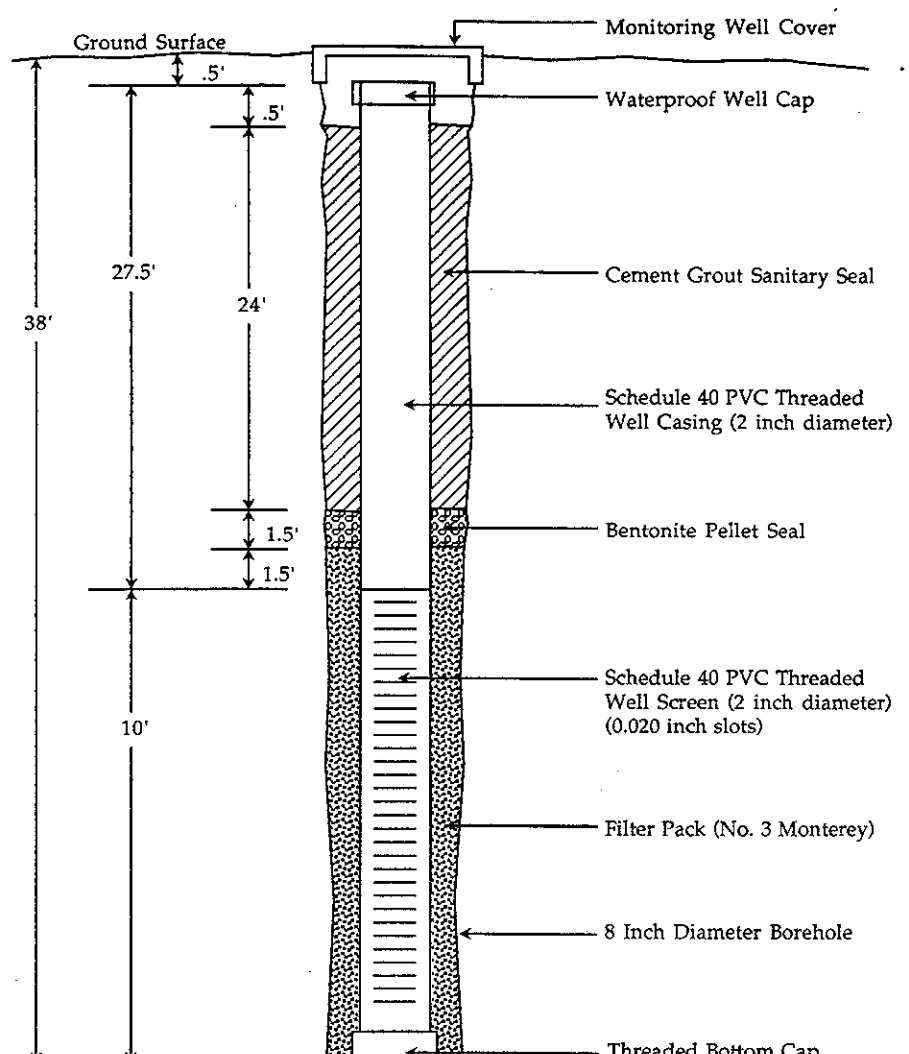
Edward Hamilton Edward Hamilton, Lab Director

DHS Certification No. 1644

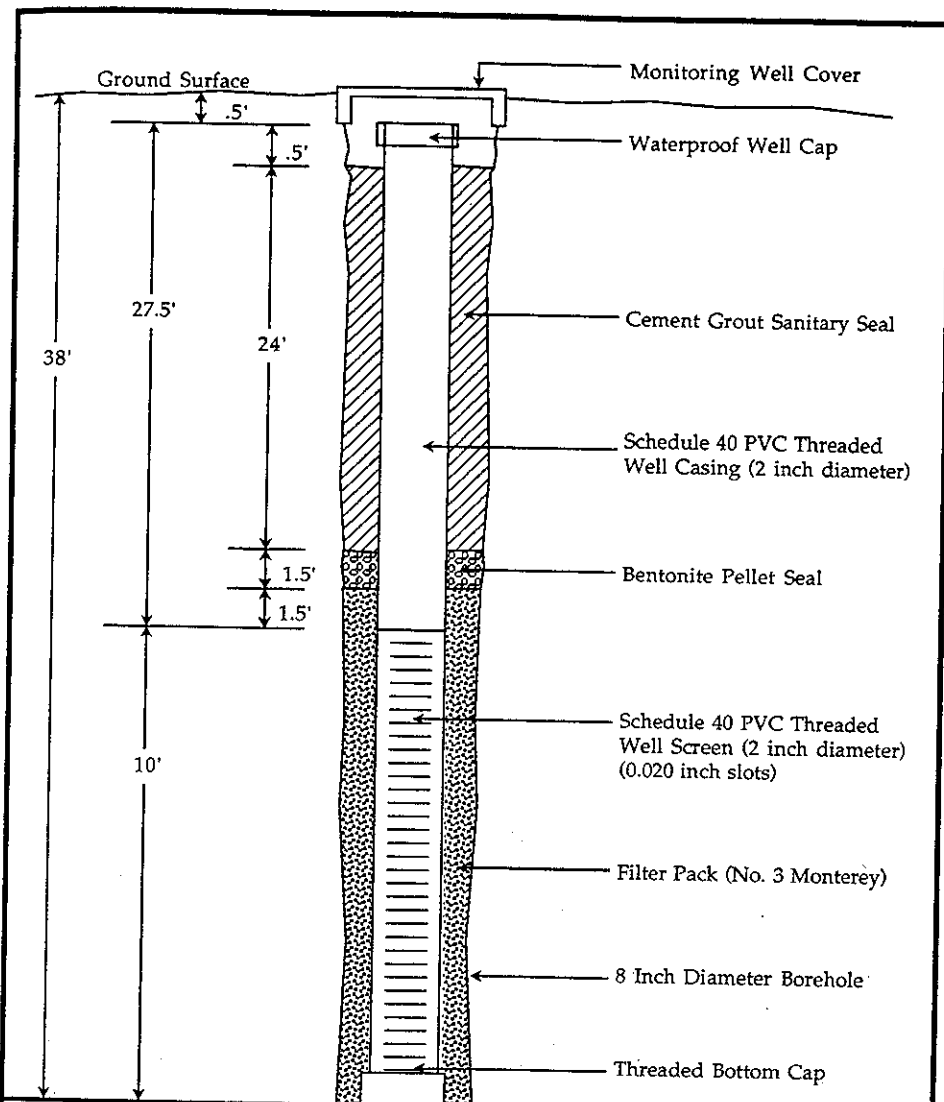
Edward Hamilton Edward Hamilton, Lab Director



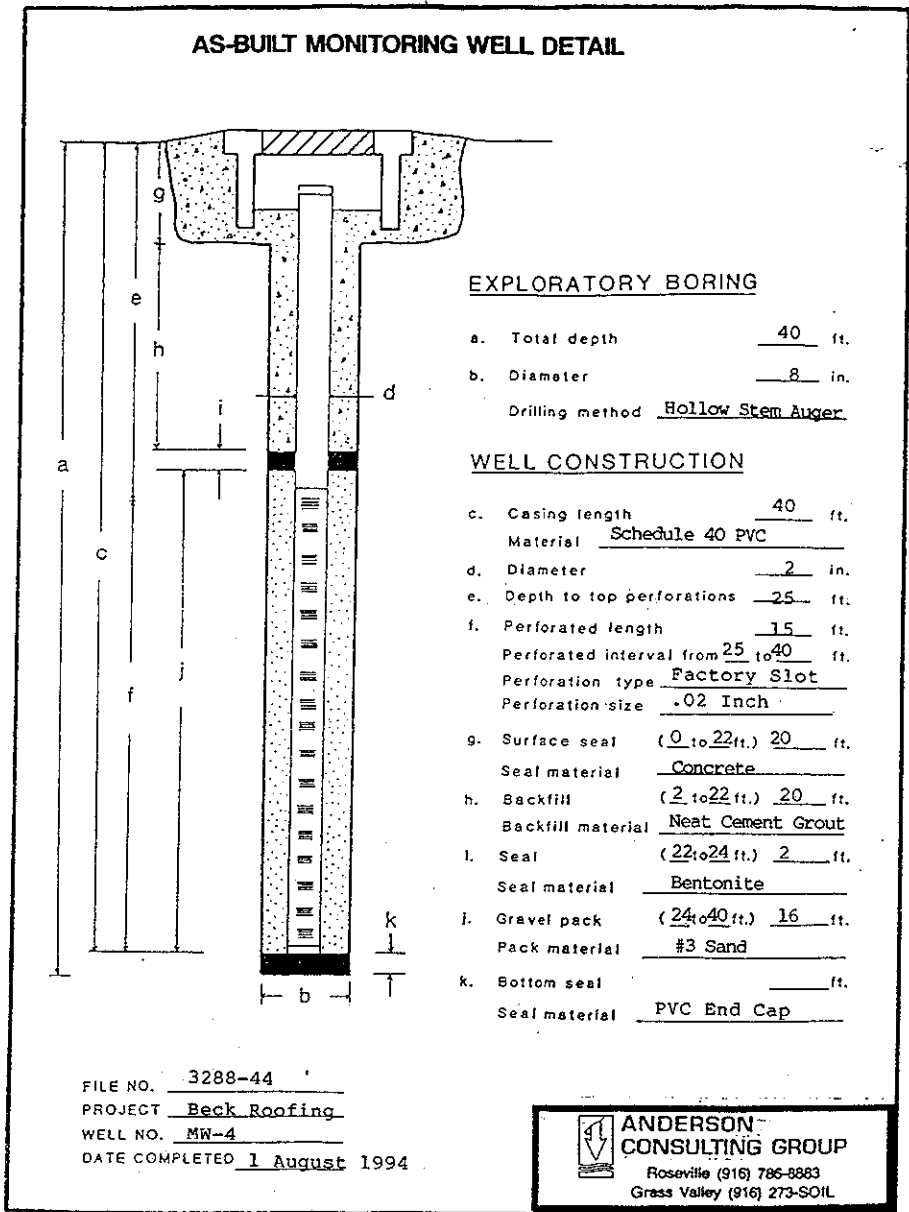
L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California Project Number: 2116	Beck Roofing 21123 Meekland Avenue Hayward, California Date: December, 1991	Monitoring Well MW-1 Installation Detail Figure Number: 10
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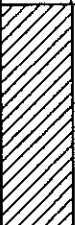

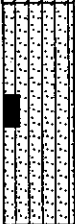
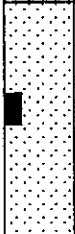




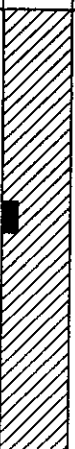

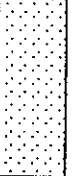


L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California Project Number: 2116	Beck Roofing 21123 Meekland Avenue Hayward, California Date: December, 1991	Monitoring Well MW-2 Installation Detail Figure Number: 11
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L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California Project Number: 2116	Beck Roofing 21123 Meekland Avenue Hayward, California Date: December, 1991	Monitoring Well MW-3 Installation Detail Figure Number: 12
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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-MW1	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	SP	925		15	Brown sand with subangular gravel, fine-grained, medium dense, moist, no odor.
2116-20-MW1	5	CL	935			Brown silty clay, medium stiff, moist, no odor, low plasticity.
L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California			Log of Boring Number: MW 1 Sheet 1 of 3 Beck Roofing 21123 Meekland Avenue Hayward, California			
Project Number: 2116			Date: November, 1991	Figure Number: 5		

Sample Number	Blows per Foot	Soil 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. Brown sand, fine-grained, medium loose, moist, no odor.
2116-35-MW1	9	SP/CL	1008	 	35	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 Environmental Services, Inc. 2111 Jennings Street San Francisco, California			Log of Boring Number: MW 1 Sheet 2 of 3 Beck Roofing 21123 Meekland Avenue Hayward, California			
Project Number: 2116			Date: November, 1991	Figure Number: 5		

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
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


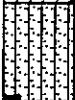


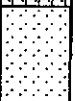
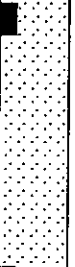

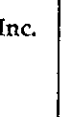

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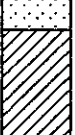
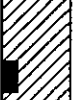




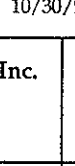
Sheet 3 of 3
 Beck Roofing
 21123 Meekland Avenue
 Hayward, California






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.
2116-5-MW2	18	SM	145		5	Brown gravel-sand-clay mixture, moist, no odor.
						
2116-10-MW2	10	SM	150		10	Brown silty sand, fine-grained, medium dense, moist, no odor.
						
2116-15-MW2	12	SP	200		15	Brown silty sand, fine-grained, loose to medium dense, moist, no odor.
						
2116-20-MW2	6	SP			20	Brown sand, fine-grained, medium dense, moist, no odor.
						
				<p>Log of Boring Number: MW 2 Sheet 1 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California</p>		
L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California				<p>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</p>		
Project Number: 2116			Date: December, 1991		Figure Number: 6	

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
						
2116-25-MW2	19	CL	235		25	Brown gravel-sand-clay mixture, moist, no odor.
						
2116-30-MW2	18	CL	245		30	Brown silty sand, fine-grained, loose to medium dense, moist, no odor.
						
2116-35-MW2	12	SM	255		35	Brown silty sand, fine-grained, loose to medium dense, moist, no odor.
						
				<p>Log of Boring Number: MW 2 Sheet 2 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California</p>		
L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California				<p>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</p>		
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.
L & W Environmental Services, Inc. 2111 Jennings Street San Francisco, California				Log of Boring Number: MW 3 Sheet 1 of 2 Beck Roofing 21123 Meekland Avenue Hayward, California		
Project Number: 2116				Date: December, 1991		Figure Number: 9

Sample Number	Blows per Foot	Soil Type	Time	Log	Depth in Feet	DESCRIPTION
						
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.
<p>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</p>						
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

LOG OF BORING: SB-18

Project: Beck Roofing

File: 3288-44

Date: 1 August 1994

Elevation: feet

Surface:

Water: None encountered

ELEV DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS & BLOW COUNTS	Sample Number	USCS	Material Description and Remarks	Dry Density (pcf)	Moisture Content (%)	Phi	C (ksf)
0			CL	Dark grey, moist, medium stiff, silty Clay - some fine Sand				
6	11/6 SB18-1							
8			ML-CL	Yellow brown, moist, medium stiff, clayey Silt/silty Clay				
11	9/6 SB18-2							
14			SP	Light brown, moist, loose-medium dense, medium coarse, Sand				
20			ML-CL	Olive-mottled, moist, soft to medium soft, clayey silt/silty Clay				

Site description and comments:



**ANDERSON
CONSULTING
GROUP**

Boring: SB-18
Depth: 40.0 ft
Figure:

LOG OF BORING: SB-18 (Continued)

Project: Beck Roofing

File: 3288-44

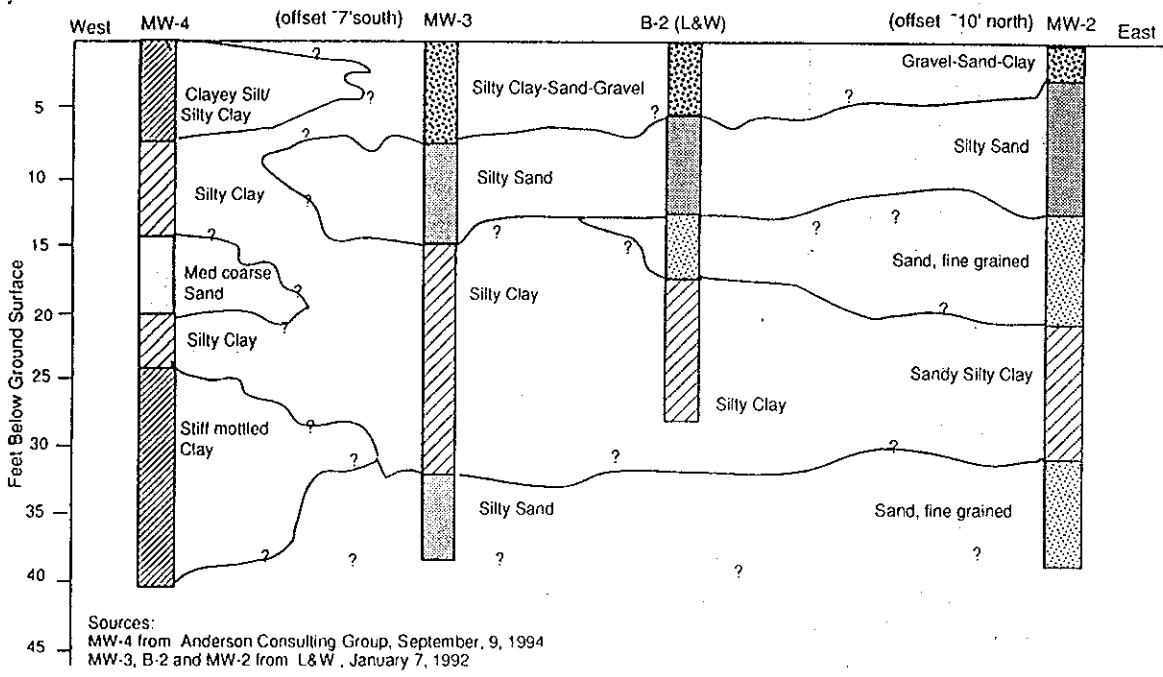
ELEV DEPTH	SOIL SYMBOLS SAMPLER SYMBOLS & BLOW COUNTS	Sample Number	USCS	Material Description and Remarks	Dry Density (pcf)	Moisture Content (%)	Phi	C (ksf)
22								
24			CL	Olive, moist, stiff, mottled Clay with trace of silt and rhizomes				
26	10/6 SB18-3							
31	9/6 SB18-4							
36	9/6 SB18-5							
40				Saturated				

Boring terminated at 40 feet



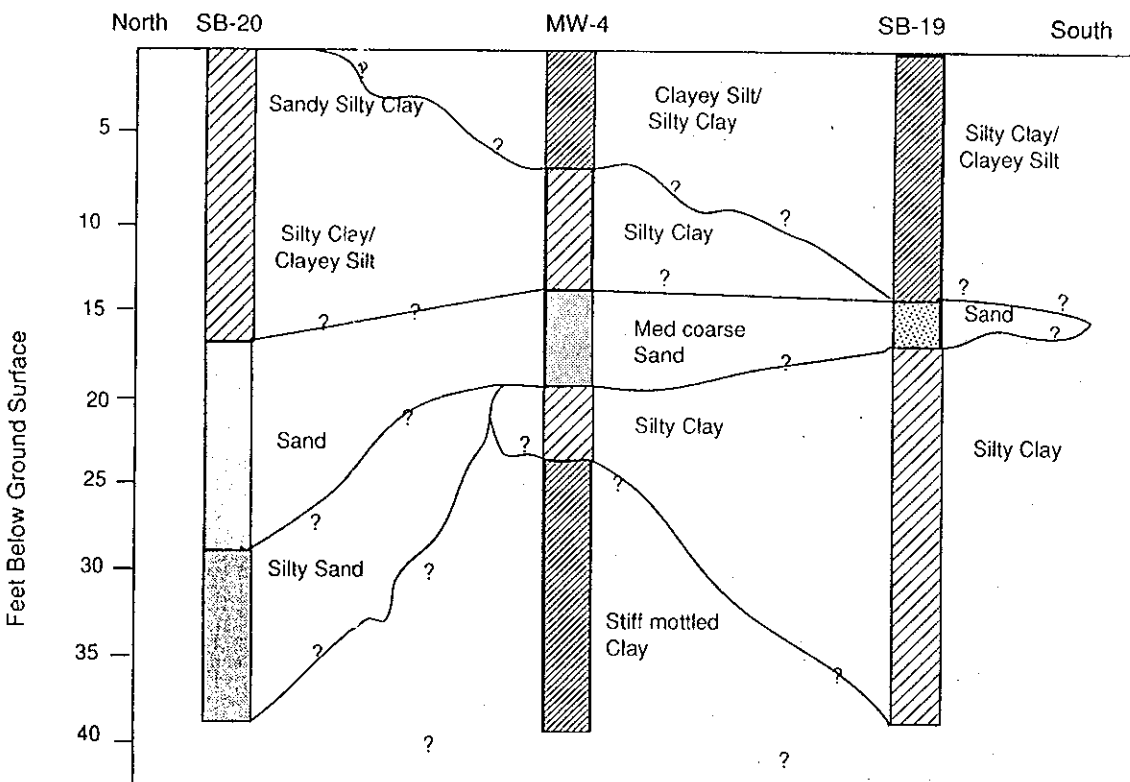
**ANDERSON
CONSULTING
GROUP**

Boring: SB-18
Depth: 40.0 ft
Figure:



Beck Roofing, Hayward, CA
 FIGURE 3 East - West Subsurface Cross -Section

HEILSHORN ENVIRONMENTAL ENGINEERING
 P.O. Box 20546, El Sobrante, CA
 (510) 222-7968 Fax (510) 222-8573 Rev. 0 Date: 11/14/97



Source:
 Anderson Consulting Group,
 September 9, 1994

Beck Roofing, Hayward, CA
 FIGURE 4 North - South Subsurface Cross -Section

HEILSHORN ENVIRONMENTAL ENGINEERING
 P.O. Box 20546, El Sobrante, CA
 (510) 222-7968 Fax (510) 222-8573 Rev. 0 Date: 11/14/97