



September 20, 1996
LOP STID 610
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REMEDIAL ACTION COMPLETION CERTIFICATION

Attn: Carl Curda
Environmental Coordinator
Findley Adhesives
11320 Watertown Plank Rd.
Wauwatosa WI 53226-3413

RE: Findley Adhesive site, 2433 Poplar St., Oakland CA 94607

Dear Mr. Curda,

Thank you for submitting the Well Closure and Purge Water Disposal letter report, dated 9/19/96, prepared by ERM West, Inc.

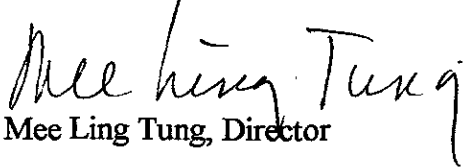
This letter confirms the completion of site investigation and remedial action for the 1,000-gallon underground storage tank (presumed gasoline) at the above referenced site. The UST was located in front of the building, between the building and sidewalk. Based on the available information and with the provision that the information provided to this agency was accurate and representative of site conditions, **no further action related to the underground tank release is required**. Please be aware that this does not free present or future landowners or operators from cleanup responsibilities in the event that new information indicates a pollutant problem on the site or originating from the site.

This notice is issued pursuant to a regulation contained in Title 23, Division 3, Chapter 16, Section 2721(e) of the California Code of Regulations. The owner must promptly notify this agency if there is a proposal for a change in land use, site activity, or structural configuration of the site (ie basements in new buildings where none were before). Such site modifications may require a re-evaluation of the chemical exposure pathways, receptor sensitivities (ie residential vs commercial/industrial), and/or other applicable criteria which may have been employed to assess potential human health risk during the case closure process.

If you have any questions regarding this letter, please contact Jennifer Eberle at (510) 567-6700, ext. 6761. Attached is a copy of the Case Closure Summary, which was reviewed and approved by this agency and the Regional Water Quality Control Board (RWQCB).

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Attn: Carl Curda

Very truly yours,


Mee Ling Tung, Director

cc: John Collier, Findley Adhesives, 355 Boxington Way, Sparks NV 89434
Jim Kane, ERM North Central, 611 E. Wisconsin Ave., suite 560, Milwaukee WI 53202
Acting Chief, Environmental Protection Division
Kevin Graves, RWQCB
Lori Casias, SWRCB (with attachment)
Dave Deaner, SWRCB, UST Cleanup Fund Program
Attn: Arun Chemburkar, ERM-West, Inc., 1777 Botelho Dr., Suite 260, Walnut Creek
CA 94596
Jennifer Eberle (3 copies)

LOP/Completion
je.610clos.let
enclosure (clos sum)

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: 4/2/96

Agency name: Alameda County-HazMat
City/State/Zip: Alameda CA 94502
Responsible staff person: Jennifer Eberle

Address: 1131 Harbor Bay Pky
Phone: (510) 567-6700
Title: Hazardous Materials Spec.

II. CASE INFORMATION

Site facility name: Findley Adhesives
Site facility address: 2433 Poplar St., Oakland CA 94607
RB LUSTIS Case No: N/A **Local Case No./LOP Case No.:** 610
URF filing date: none filed **SWEEPS No:** N/A

Responsible Parties: **Addresses:** **Phone Numbers:**
John Collier, Findley Adhesives Inc., 355 Boxington Way, Sparks NV 89434 (414-774-2250)

<u>Tank No:</u>	<u>Size in gal.:</u>	<u>Contents:</u>	<u>Closed in-place or removed?:</u>	<u>Date:</u>
1	1,000	Likely gasoline	removed	12/1/94

96 JUL 15 AM 8:54
ENVIRONMENTAL PROTECTION

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: unknown
Site characterization complete? YES
Date approved by oversight agency: 4/2/96
Monitoring Wells installed? YES **Number:** 3
Proper screened interval? YES
Highest GW depth below ground surface: 2.31' (MW1 on 5/12/95) **Lowest depth:** 8.68' (MW3 on 4/17/95)
Flow direction: SE
Most sensitive current use: commercial
Are drinking water wells affected? NO **Aquifer name:**
Is surface water affected? NO **Nearest affected SW name:**
Off-site beneficial use impacts (addresses/locations): unknown

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

Leaking Underground Fuel Storage Tank Program

Treatment and Disposal of Affected Material:

<u>Material</u>	<u>Amount</u> <u>(include units)</u>	<u>Action (Treatment</u> <u>of Disposal w/destination)</u>	<u>Date</u>
Tank	1000 gal	disposed to H&H (#93618010)	12/1/94
Piping	illegible	disposed to H&H (#9368010)	12/1/94
Free Product	NA		
Soil	54 yd3	disposed to Vasco Rd. (under non-HW manifests)	4/19/95
Groundwater	NA		

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued) Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)			Water (ppb)**	
	<u>Before</u>	<u>After-A*</u>	<u>B*</u>	<u>Before</u>	<u>After</u>
TPH (Gas)	800	0.060	150	130	ND
TPH (Diesel)	1,000	ND	110	660	500
Benzene	5.1	0.037	0.61	6.7	ND
Toluene	3.3	ND	0.67	1.2	ND
Xylene	3.0	ND	0.90	2.2	2.5
Ethylbenzene	3.2	0.007	0.73	0.41	0.72
Oil & Grease	NA	28		NA	
Heavy metals	NA	NA		NA	

Comments (Depth of Remediation, etc.):

A* overexcavation sample from South wall at 5'bgs; see Table 3 and Figure 3

B* sample from material scraped from West wall at 6.5'bgs; see Table 1 and Figure 1

**both sets of data are from the initial and final quarterly sampling in the MWs (maximum values); see Table 4

Leaking Underground Fuel Storage Tank Program

IV. CLOSURE

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

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

Does corrective action protect public health for current land use? YES
Site management requirements: NA

Should corrective action be reviewed if land use changes? YES NO
Monitoring wells Decommissioned: Not yet (as of 4/9/96); will be closed when RWQCB signs off
Number Decommissioned: 0 Number Retained: 3
List enforcement actions taken: none
List enforcement actions rescinded: none

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Jennifer Eberle Title: Hazardous Materials Specialist
Signature: *J Eberle* Date: 5-30-96

Reviewed by
Name: Amy Leech Title: Hazardous Materials Specialist
Signature: *Amy Leech* Date: 5-30-96

Name: Tom Peacock Title: Manager
Signature: *Tom Peacock* Date: 6-18-96

VI. RWQCB NOTIFICATION

Date Submitted to RB: 6-24-96 RB Response: *Approved*
RWQCB Staff Name: Kevin Graves Title: AWRCE Date: 7/10/96
K Graves

Leaking Underground Fuel Storage Tank Program

VII. ADDITIONAL COMMENTS, DATA, ETC.

A 1,000-gallon UST was removed on 12/1/94. Findley reported they never used the UST, and believed it was present when they bought the site approximately 25 years earlier. The UST was steel, tar wrapped, and showed signs of corrosion, with no obvious holes. There were hydrocarbon odors in the tank pit. Groundwater was present at 5'3" in the tank pit.

A hydraulic lift cylinder was also removed on 12/1/94. Hydraulic lift devices are exempt from state regulation. In addition, this cylinder was reportedly a fully self-contained unit without a separate underground reservoir. Both UST and lift were hauled under HW manifest.

The water in the tank pit was vacuumed out on 12/1/94. There was a dark brown color and also a rainbow sheen on the groundwater. Water was also vacuumed out from the hydraulic lift pit. Four walls of the tank pit were sampled. The pit water recharged, and was sampled on 12/9/94, after rainwater had entered the pit on 12/6/94. No sheen was detected on 12/9/94.

Results indicated maximum soil concentrations of 800 ppm TPHg, 1,000 ppm TPHd, 1,400 ppm TPHk, 5.1 ppm benzene, 3.3 ppm toluene, 3.2 ppm ethylbenzene, and 3.0 ppm xylenes (South wall at 5.5'bgs). The pit water contained 110 ppb Tphg, 110 ppb Tphd, ND TPHk, 3.0 ppb benzene, 0.55 ppb toluene, ND ethylbenzene, and 0.97 ppb xylenes. See Table 1 and Figure 1

The west wall was subsequently scraped but not resampled. The soil scraped off the west wall was sampled separately. Results are indicated in Table 1 as "tank scraped wall soil 6.5 ft," and are 150 ppm TPHg, 110 ppm TPHd, ND TPHk, and 0.61 ppm benzene. The proximity of the building prevented further scraping or overexcavation of the west wall.

Three soil borings and two monitoring wells were subsequently installed on 3/21/95. See Figure 2. Results indicated maximum soil concentrations of 480 ppm Tphg, 79 ppm TPHd, 4.2 ppm benzene, 1.9 ppm toluene, 6.4 ppm ethylbenzene, 4.2 ppm xylenes, and 67 ppm TRPH (418.1) in SB-1 at 3'bgs. See Table 2. These soil borings were installed to determine the lateral extent of HC contamination, prior to siting and installing MW3 on 4/14/95.

The south end of the tank pit was overexcavated and resampled on 4/3/95. See Figure 3. This overexcavation removed soil from the areas of SB-1 and SB-2, which had detectable concentrations of benzene (see Table 2). The confirmatory sample, taken at 5'bgs, indicated trace to ND levels: 0.60 ppm TPHg, ND TPHd, 0.037 ppm benzene, ND toluene, 0.007 ppm ethylbenzene, ND xylenes, and 28 ppm TRPH (by 418.1). See Table 3.

Leaking Underground Fuel Storage Tank Program

Groundwater has been sampled for four consecutive quarters, from 4/95 to 1/96. See Table 4. Results indicate an overall decrease of benzene and toluene, which indicates degradation of the lighter ends of BTEX, consistent with natural attenuation.

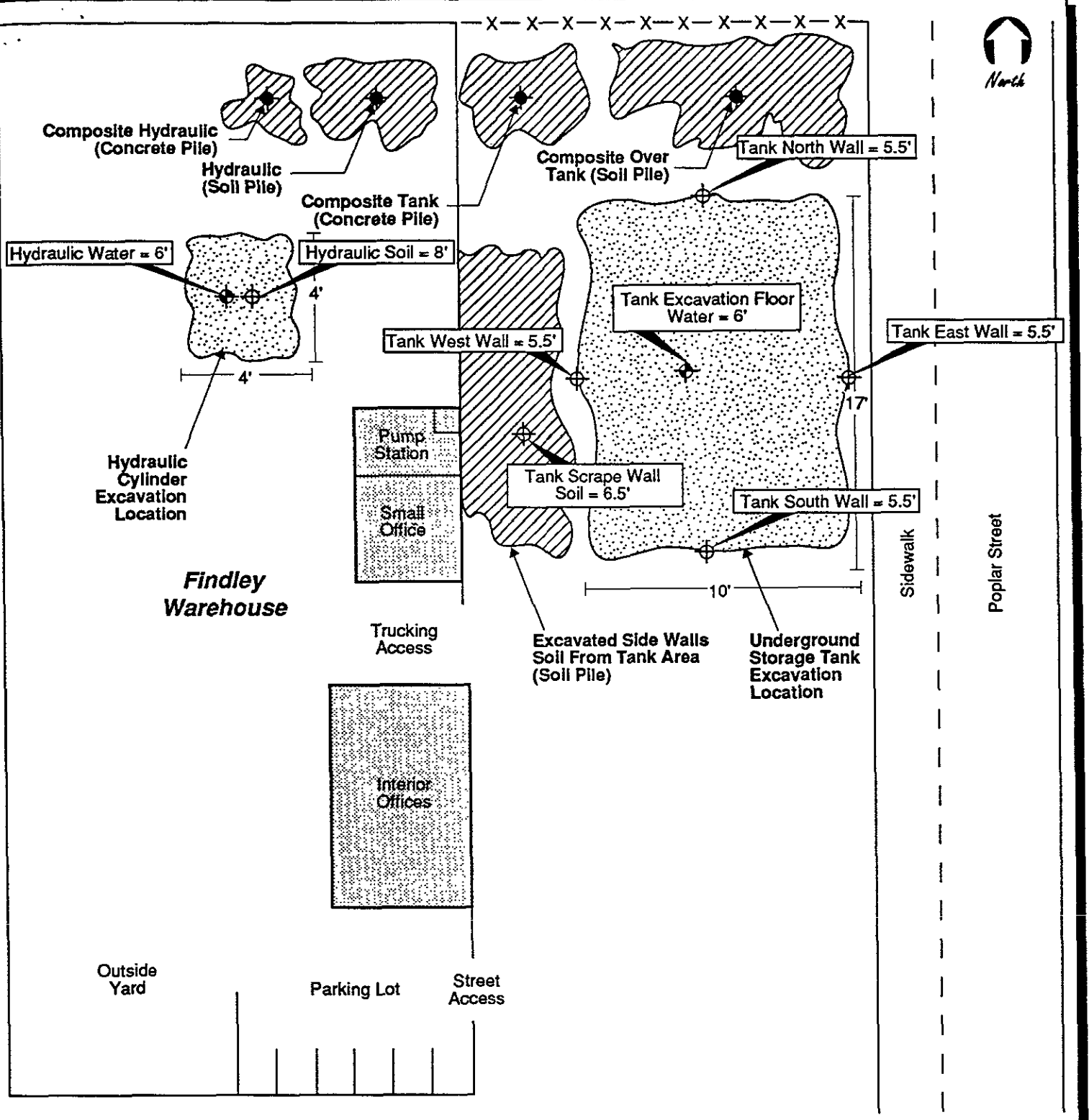
Contrary to the regional Northwest groundwater flow, groundwater flow direction at this site has been consistently Southeast, as was verified by monthly measurements. However, MWs were placed to the North, South, and West of the tank pit.

Although there is no MW directly downgradient of the former tank pit (to the Southeast), the maximum soil concentrations remaining in place are fairly low: 150 ppm TPHg, 110 ppm TPHd, ND TPHk, 0.61 ppm benzene, 0.67 ppm toluene, 0.73 ppm ethylbenzene, and 0.90 ppm xylenes. Again, these are the concentrations from the soil that was scraped OFF the west wall. Unfortunately, the west wall was not resampled. The actual concentrations remaining inside the tank pit on the west wall may be lower. Since the residual soil concentrations are relatively low, it is likely that a MW placed to the SE of the tank pit would not indicate concentrations significantly higher than those in the other 3 Mws. In addition, the land use immediately to the Southeast of the site is commercial/industrial.

The residual soil concentrations were compared to ASTM's RBCA Tier 1. Using the soil to outdoor air pathway, commercial, 10 x -5 cancer risk, 0.61 ppm benzene is < 1.325 ppm. (The benzene concentrations was found below the sidewalk, which is why we use the outdoor air pathway.) The TPHd concentration of 110 ppm is < than "RES" for naphthalene and benzo(a)pyrene.

The most recent (maximum) groundwater concentrations were also compared to ASTM's RBCA Tier 1. Benzene and toluene were ND. Ethylbenzene and xylenes were < "S," making it a moot issue. The TPHd concentration of 500 ppb is < "S" for naphthalene and benzo(a)pyrene.

If we use the maximum groundwater concentration of benzene ever detected at the site, which is 8.5 ppb, we find it is < both the residential RBSL (3,190 ppb) or the commercial/industrial RBSL (5,340 ppb) for the volatilization to outdoor air pathway, using 10 x -6 cancer risk. Since the well with 8.5 ppb benzene (MW3) is in the sidewalk, we use the outdoor air pathway. Similarly, the maximum toluene concentration ever detected was 1.2 ppb (MW3), which is < both the residential RBSL (> S) or the commercial/industrial RBSL (> S) for the volatilization to outdoor air pathway, making it a moot issue.

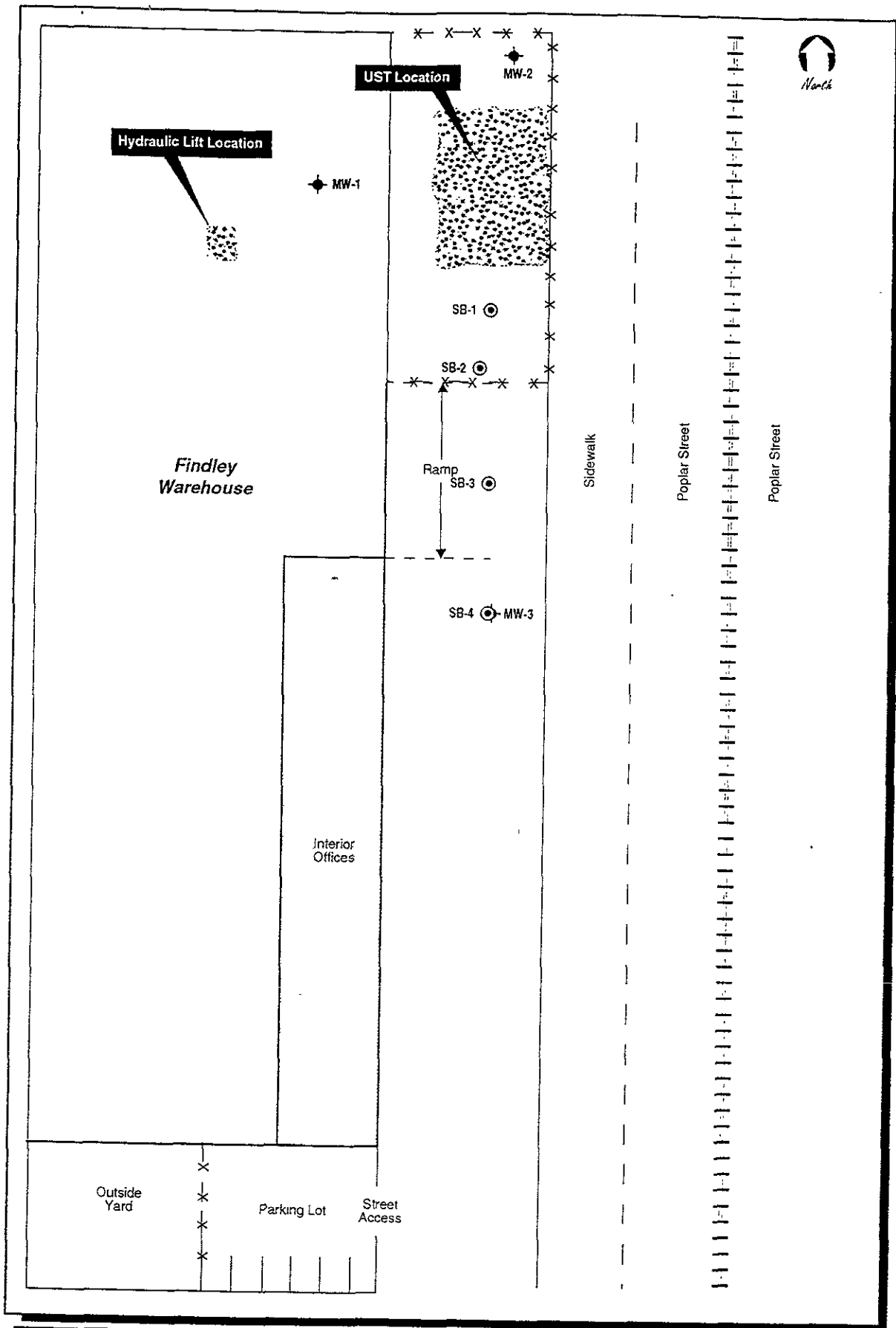


Legend

- ⊕ Discrete Soil Sample Location
- ⊗ Groundwater Sample Location
- ◆ Composite Sample Location
- ▨ Stock Pile
- X - Fence

Note: Map Is Not To Scale

Figure 1
Underground Storage Tank and Hydraulic Cylinder
Soil and Groundwater Sample Locations
Findley Adhesive
Oakland, California



Legend

- ⊙ Proposed Soil Boring Location
- ◆ Proposed Soil Boring/Monitoring Well Location
- X - Fence

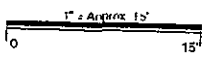
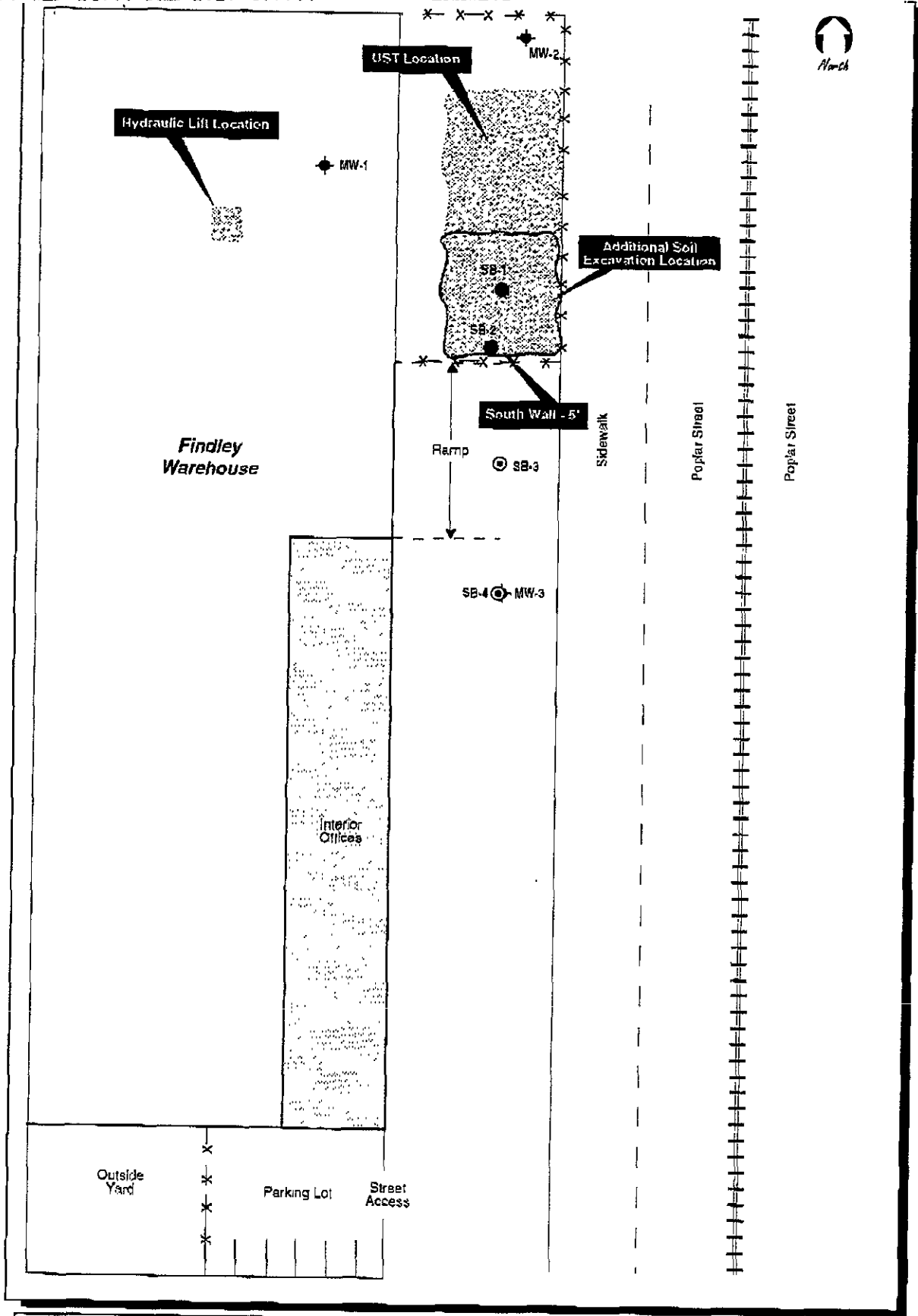


Figure 2
Soil Boring/Monitoring Well Locations
Findley Adhesive
Oakland, California



Legend

- ⊙ Previous Soil Boring Location
- Confirmation Soil Sample Location
- x- Fence



Figure 3
Additional Soil Excavation
and Soil Sampling Location
Findley Adhesive
Oakland, California

Table 1

Excavation Soil & Ground Water Analytical Results Findley Adhesive Oakland, California

Sample NO#	Sample Location	Matrix	TPH GASOLINE EPA 8015	TPH DIESEL EPA 8015	TPH Kerosine EPA 8015	BTEX EPA 8020	PCB EPA 8080
Tank North Wall= 5.5'	North Side/Bottom Tank Excavation Area	Soil	ND	3.2 ppm	ND	Benzene= ND Toluene= ND Ethyl Benzene= ND Xylenes= ND	N/A
Tank South Wall= 5.5'	South Side/Bottom Tank Excavation Area	Soil	800 ppm	1000 ppm	1400 ppm	Benzene= 5.1 ppm Toluene= 3.3 ppm Ethyl Benzene= 3.2 ppm Xylenes= 3.0 ppm	N/A
Tank West Wall= 5.5'	West Side/Bottom Tank Excavation Area	Soil	170 ppm	36 ppm	ND	Benzene= .72 ppm Toluene= 1.8 ppm Ethyl Benzene= .95 ppm Xylenes= .87 ppm	N/A
Tank East wall= 5.5'	East Side/Bottom Tank Excavation Area	Soil	ND	1.8 ppm	ND	Benzene= ND Toluene= ND Ethyl Benzene= ND Xylenes= ND	N/A
Tank Excavation Floor Water= 6'	Ground water/Bottom Tank Excavation Area	Water	110 ppb	110 ppb	ND	Benzene= 3.0 ppb Toluene= .55 ppb Ethyl Benzene= ND Xylenes= .97 ppb	N/A
Hydraulic water= 6'	Ground Water/Bottom Hydraulic Cylinder	Water	N/A	N/A	N/A	N/A	ND
Hydraulic Soil= 8'	Hydraulic Cylinder/ Bottom Of Excavation	Soil	N/A	N/A	N/A	N/A	ND
Tank Scraped wall Soil= 6.5'	Composite/Excavated Soil Bottom/Tank Walls	Soil	150 ppm	110 ppm	ND	Benzene= .61 ppm Toluene= .67 ppm Ethyl Benzene= .73 ppm Xylenes= .90 ppm	N/A
Composite Over Tank Soil	Overlying Soil/Top of the Tank	Soil	4.9 ppm	12 ppm	ND	Benzene= ND Toluene= .020 ppm Ethyl Benzene= .038 ppm Xylenes= .062 ppm	N/A
Composite Tank Concrete	Overlying Concrete/ Top of the Tank	Concrete	ND	1.4 ppm	ND	Benzene= ND Toluene= ND Ethyl Benzene= ND Xylenes= ND	N/A
Composite Hydraulic Concrete	Overlying Concrete/ Top of the Hydraulic Cylinder	Concrete	ND	4.2 ppm	ND	Benzene= ND Toluene= ND Ethyl Benzene= ND Xylenes= ND	N/A

mg/kg= milligram per kilogram or parts per million (ppm)

µg/kg= microgram per kilogram or parts per billion (ppb)

µg/L= microgram per Liter or parts per billion (ppb)

ND=not detected

N/A=not applicable

Summary Of Analytical Results For Soil And Groundwater
Findley Adhesive Site, Oakland, California

Soil Analytical Results 3-21-95

SAMPLE I.D.	SAMPLE DEPTH (feet)	EPA METHOD 8015		EPA METHOD 8020 (mg/kg) ✓				EPA METHOD 418.1	HEADSPACE MEASUREMENTS
		TOTAL PETROLEUM HYDROCARBONS (mg/kg) ✓		BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	TRPH (mg/kg)	VOCs (ppm)
GASOLINE	DIESEL								
SB-1	3	480 /	79 /	4.2 /	1.9	6.4	4.2	67 /	163
SB-1	8	2.7 /	<10 /	0.21 /	0.016	0.0064	<0.020	30 /	298
SB-2	3 /	<0.5 /	<10 /	0.019 /	<.005	<.005	<.020	<10 /	4.3
SB-2	9.5	<0.5 /	<10 /	<.005 /	<.005	<.005	<.020	<10 /	6.5
SB-3	8	<0.5 /	<10 /	<.005 /	<.005	<.005	<.020	<10 /	2.3
SB-4	4.5	1.4 ✓	<10 ✓	0.005 ✓	0.0069	0.0069	0.033	<10 /	1.7
SB-4	8	NA	NA	NA	NA	NA	NA	<10 /	1.9
MW-1	8	<0.5	<10	<.005	<.005	<.005	<.020	NA	0
MW-2	8	2.1	<10	<.005	<.005	<.005	<.020	NA	1.5

all are below RBCA value
or benzene 0.272 ppm
not vol to outdoor air
EXCEPT SB-1-3'

Groundwater Analytical Results 4-19-95

SAMPLE I.D.	SAMPLE DEPTH (feet)	EPA METHOD 8015		EPA METHOD 8020 (µg/L)				EPA METHOD 418.1
		TOTAL PETROLEUM HYDROCARBONS (µg/L)		BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	TRPH (µg/L)
GASOLINE	DIESEL							
MW-1		<100 /	660 /	<.3 /	<.3	<.3	<.6	NA
MW-2		<100 /	<500 /	<.3 /	<.3	<.3	<.6	NA
MW-3		130 /	<500 /	6.7 /	1.2	0.41	2.2	NA

µg/L=microgram per liter or parts per billion (ppb)
mg/kg= milligram per kilogram or parts per million (ppm)
TRPH= Total Recoverable Petroleum Hydrocarbon
NA= sample not analyzed for specified constituents

TABLE ~~3~~

**Soil Analytical Results (Additional Excavation)
Findley Adhesive Site
Oakland, California**

SAMPLE I.D.	SAMPLE DEPTH (feet)	EPA METHOD 8015		EPA METHOD 8020				EPA METHOD 418.1
		TOTAL PETROLEUM HYDROCARBONS (mg/kg)		(mg/kg)				TRPH (mg/kg)
		GASOLINE	DIESEL	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	
South Wall	5	0.60 ✓	<10 ✓	0.037 ✓	<.005 ✓	0.007 ✓	<.020 ✓	28 ✓

BQL= Below Practical Quantitation Limit

mg/kg= milligram per kilogram or parts per million (ppm)

µg/kg= microgram per kilogram or parts per billion (ppb)

TRPH= Total Recoverable Petroleum Hydrocarbon

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Table 3.1

*Summary Of Annual Groundwater Monitoring Analytical Results
 Findley Adhesive Site
 Oakland, California*

EPA Method		8015	8015	8020	8020	8020	8020
Monitoring Well No.	Date	TPH-Gasoline µg/L	TPH-Diesel µg/L	Benzene µg/L	Toluene µg/L	Ethyl-Benzene µg/L	Total Xylenes µg/L
MW-1	4/17/95	<100	660	<.3	<.3	<.3	<.6
MW-2	4/17/95	<100	<500	<.3	<.3	<.3	<.6
MW-3	4/17/95	130	<500	6.7	1.2	0.41	2.2
MW-1	7/21/95	<50	<50	<.5	<.5	<.5	<.5
MW-2	7/21/95	<50	<50	<.5	<.5	<.5	<.5
MW-3	7/21/95	180	300	8.5	0.61	0.91	3.3
MW-1	10/20/95	<.50	91	<.5	<.5	<.5	<.5
MW-2	10/20/95	<.50	98	<.5	<.5	<.5	<.5
MW-3	10/20/95	<.50	350	2.3	0.63	0.6	2.2
MW-1	1/25/96	<.50	55	<.5	<.5	<.5	<.5
MW-2	1/25/96	<.50	92	<.5	<.5	<.5	<.5
MW-3	1/25/96	<.50	500	<.5	<.5	0.72	2.5

µg/L= microgram per liter or parts per billion (ppb)