ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

REMEDIAL ACTION COMPLETION CERTIFICATION

StID 3856- 1055 Eastshore Highway, Albany, CA
(1-500 gallon gasoline tank removed on September 2, 1992)

December 7, 1998

Mr. George Lindsay
Southern Pacific Transportation
1 Market Plaza, Building 912
San Francisco, CA 94105

Mr. Lorenzo Bracy
Amfac Distribution Corp
900 N Michigan, 14th Floor
Chicago, IL 60611

Dear Messrs. Lindsay and Bracy:

This letter confirms the completion of site investigation and remedial action for the underground storage tank 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 are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

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

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

Sincerely,

Mee Ling Tung, Director

cc: Richard Pantages, Chief of Division of Environmental Protection
Chuck Headlee, RWQCB
Dave Deaner, SWRCB
Bruce Crudo, Albany Fire Department
files-ec (warehouse3)

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StID 3856

December 7, 1998

Mr. George Lindsay
Southern Pacific Transportation
1 Market Plaza, Building 912
San Francisco, CA 94105

Mr. Lorenzo Bracy
Amfac Distribution Corp
900 N Michigan, 14th Floor
Chicago, IL 60611

Re: Fuel Leak Site Case Closure for Warehouse Distribution, at 1055 Eastshore Highway, Albany, CA

Dear Messrs. Lindsay and Bracy:

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

SITE INVESTIGATION AND CLEANUP SUMMARY

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

- up to 66ppm TPH as gasoline and 0.055ppm benzene exists in soil beneath the site;
- up to 600ppb TPHg and 8.8ppb benzene exists in groundwater beneath the site; and,
- a site safety plan must be prepared for construction workers in the event of excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.

If you have any questions, please contact me at (510) 567-6762.

eva chu
Hazardous Materials Specialist

enlosures: 1. Case Closure Letter 2. Case Closure Summary

c: Ann Chaney, Community Development Director, 1000 San Pablo Ave, Albany, CA 94706
files (warehouse4)

RB# 01-1711

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: **August 31, 1998**

Agency name: **Alameda County-HazMat**
City/State/Zip: **Alameda, CA 94502**
Responsible staff person: **Eva Chu**

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

II. CASE INFORMATION

Site facility name: **Warehouse Distribution**
Site facility address: **1055 Eastshore Highway, Albany, CA**
RB LUSTIS Case No: **N/A** Local Case No./LOP Case No.: **3856**
URF filing date: **9/9/92** SWEEPS No: **N/A**

Responsible Parties:	Addresses:	Phone Numbers:
George Lindsay **Southern Pacific Transportation** **1 Market Plaza, Building 912** **San Francisco, CA 94105**	**John Frank** **Amfac Distribution Corp** **900 N Michigan, 14th Floor** **Chicago, IL 60611**	

Tank No:	Size in gal.:	Contents:	Closed in-place or removed?:	Date:
1	500	Gasoline	Removed	9/2/92

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**
Site characterization complete? **YES**
Date approved by oversight agency: **8/18/98**
Monitoring Wells installed? **Yes** Number: **4**
Proper screened interval? **Yes, 4' to 19' in well MW-2**
Highest GW depth below ground surface: **3.51'** Lowest depth: **6.34' in well MW-2**
Flow direction: **Predominately to SW**
Most sensitive current use:
Are drinking water wells affected? **No** Aquifer name: **Unknown**
Is surface water affected? **No** Nearest affected SW name:
Off-site beneficial use impacts (addresses/locations): **NA**
Report(s) on file? **YES** Where is report(s) filed? **Alameda County**
1131 Harbor Bay Pkwy
Alameda, CA 94502

Treatment and Disposal of Affected Material:

Material	Amount (include units)	Action (Treatment or Disposal w/destination)	Date
Tank	**1 UST**	**Disposed at Erickson, Richmond**	**9/2/92**
Soil	**25 tons**	**Treated at Remco, Richmond**	
	188 tons	**Treated at Remco, Richmond**	

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (ppm)		Water (ppb)	
	Before[1]	After[2]	Before[3]	After[4]
TPH (Gas)	**1,600**	**66**	**9,700**	**600**
Benzene	**7.5**	**.055**	**1,200**	**8.8**
Toluene	**49**	**.028**	**140**	**ND**
Ethylbenzene	**42**	**.046**	**440**	**18**
Xylenes	**210**	**.320**	**1,300**	**16**
MTBE	**NA**	**NA**	**NA**	**ND**
Other				

NOTE: 1 soil sample collected from tank pit, 9/92
2 soil sample collected after overexcavation, 10/95
3 maximum groundwater concentration from monitoring wells, 1/97
4 most recent sampling event, 8/97

IV. CLOSURE

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

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

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

Site management requirements: **A site safety plan must be prepared for construction workers in the event excavation/trenching is proposed in the vicinity of residual soil and groundwater contamination.**

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

Monitoring wells Decommissioned: **None, pending site closure**

Number Decommissioned: **0** Number Retained: **4**

List enforcement actions taken:

List enforcement actions rescinded:

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu** Title: **Haz Mat Specialist**

Signature: Date: 8/31/98

Reviewed by

Name: **Larry Seto** Title: **Sr. Haz Mat Specialist**

Signature: Date: 8-31-98

Name: **Thomas Peacock** Title: **Supervisor**

Signature: Date: 9-23-98

VI. RWQCB NOTIFICATION

Date Submitted to RB: 10/9/98 RB Response:

RWQCB Staff Name: **Chuck Headlee** Title: **EG**

Signature: Date: 10/16/98

VII. ADDITIONAL COMMENTS, DATA, ETC.

A 500 gallon gasoline UST was removed in September 2, 1992. The tank had several corrosion holes near its base. Soil beneath the tank was stained. Water was observed at the base of the tank pit. Two soil samples (S-1 West and S-2 East) were collected from end of the tank at a depth of approximately 7'bgs. A grab groundwater sample (W-1 Ctr) was also collected. Total petroleum hydrocarbons were noted in all the samples. (See Fig 1, 2 and Table 1)

The pit was over-excavated in the westerly and southerly direction. Three soil samples, TS-2, TE-2, and TW-2, were collected from the walls of the excavation at ~10' bgs. These soil samples contained substantially higher concentrations of hydrocarbon constituents than the samples collected at 7'bgs. (See Fig 3, Table 2)

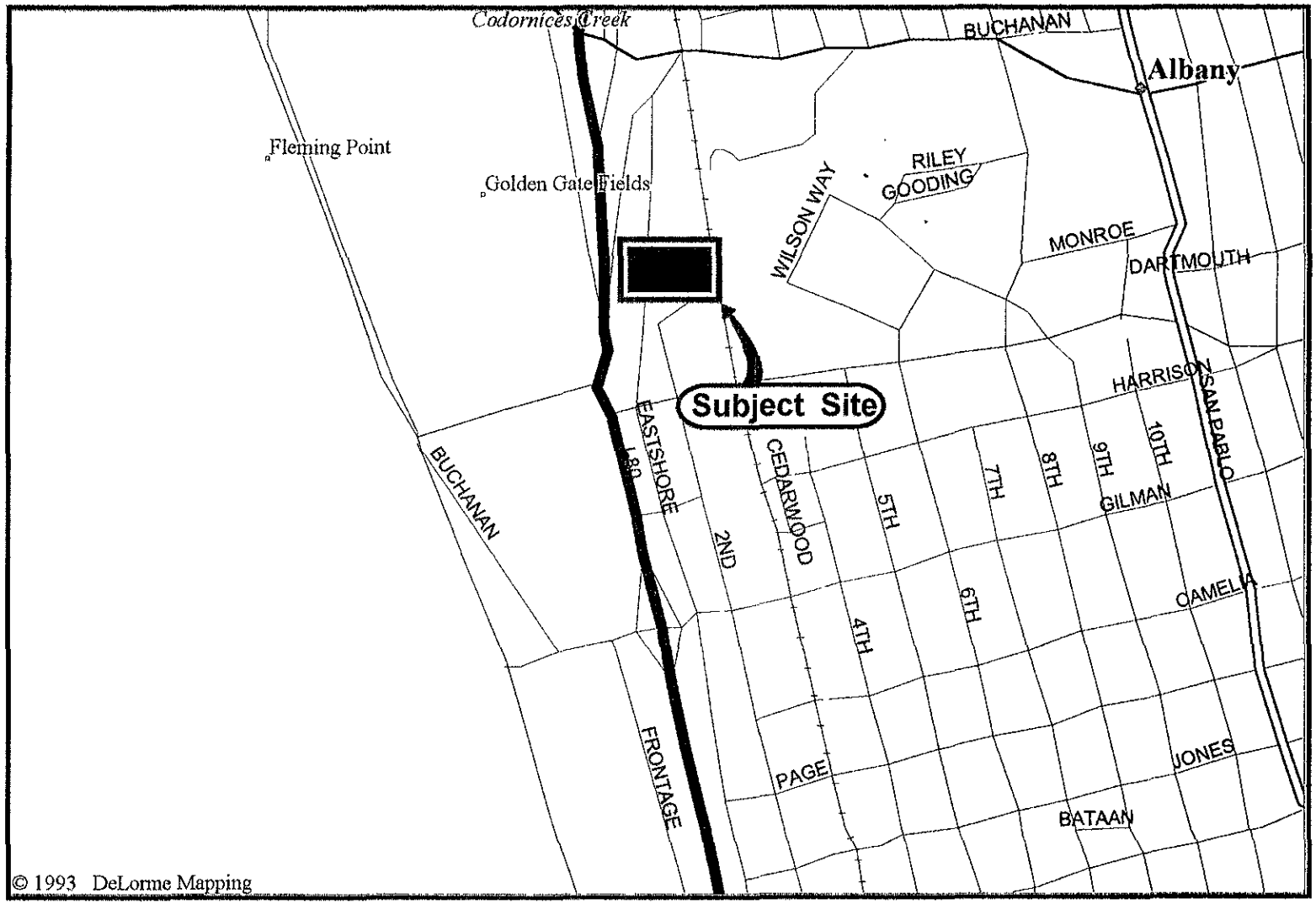
In two phases, June 1994 and May 1995, a total of twelve exploratory borings, SB-1 through SB-4, MW-1 through MW-3 (which were converted into groundwater monitoring wells), and P-1 through P-5, were drilled at the site to delineate the extent of soil and groundwater contamination. Groundwater was encountered at ~6.5'bgs. A total of 24 soil and three groundwater samples were collected for TPHg and BTEX analyses. Based on analytical results, soil contamination appeared limited to the capillary fringe, at 4' to 6.5'bgs and within 25' of the former tank excavation. Groundwater appeared to flow to the south, southwest with a relatively flat gradient of 0.003 to 0.009 ft/ft. All wells contained low levels of petroleum hydrocarbons. A fourth groundwater monitoring well, MW-4, was installed south of the former tank pit in June 1995. (See Fig 4, Table 3, 4)

In October 1995 the hydrocarbon impacted soil was overexcavated, removing ~188 tons of soil. Confirmatory soil samples were collected from the bottom (EXB-8.5') and sidewalls (EX-SSW-5.5', EX-ESW-6.0', and EX-NWSW-6.0') of the excavation. A maximum of 66ppm TPHg and 0.05ppm benzene were identified from the samples. (See Fig 4, Table 5)

Groundwater was sampled on a quarterly basis from June 1995 to April 1997. Only well MW-2 continues to identify elevated benzene concentrations (see Table 6). The extent of contamination is limited to the immediate vicinity of the former tank pit. Residual BTEX constituents in groundwater does not pose a risk to human health, based on ASTM's Risk-Based Screening Level Look-Up Table.

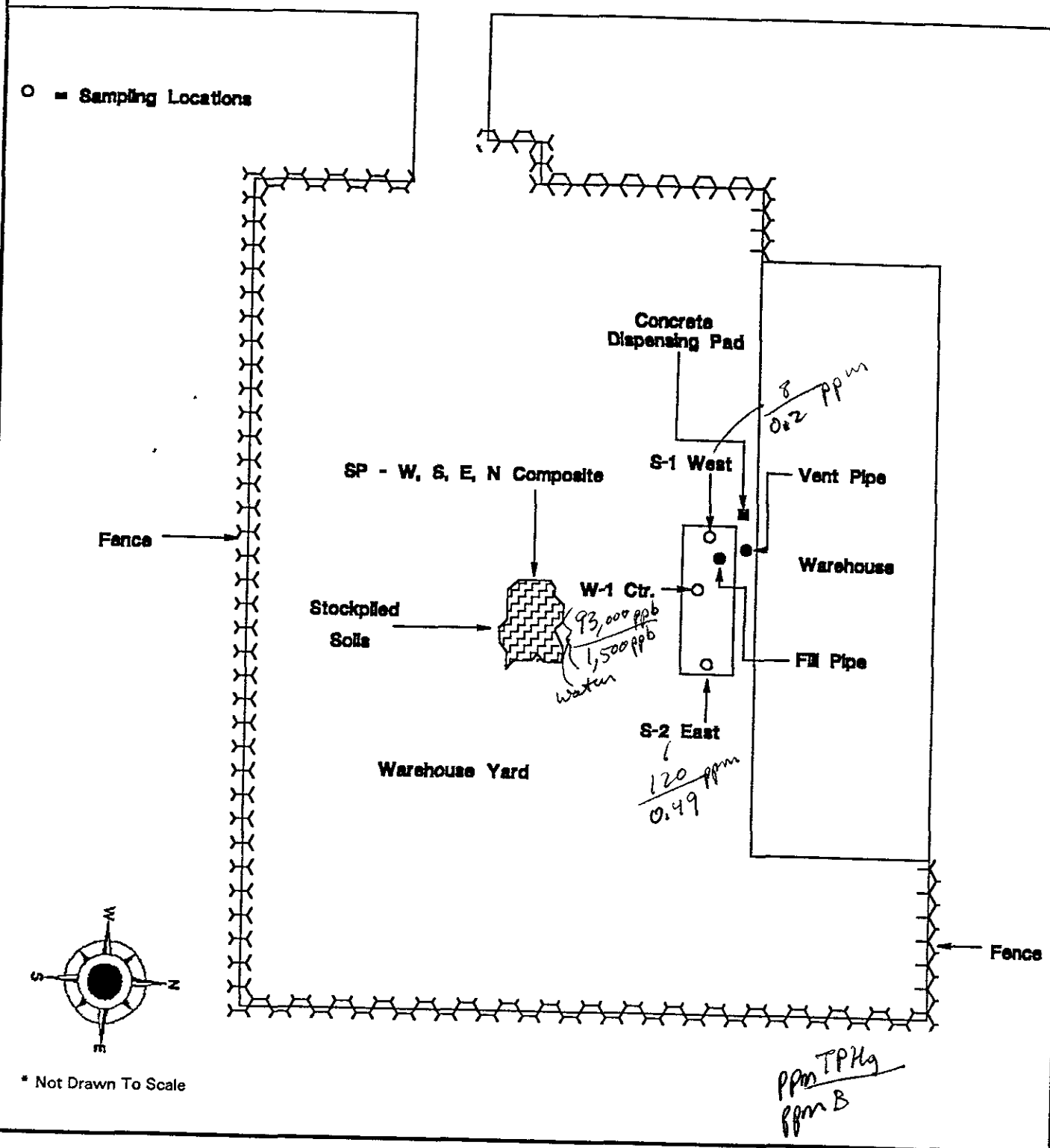
In summary, case closure is recommended because:

- the leak and ongoing sources have been removed;
- the site has been adequately characterized;
- the dissolved plume is not migrating;
- no water wells, surface water, or other sensitive receptors are likely to be impacted; and,
- the site presents no significant risk to human health or the environment.



AllWest

December 1995	**Subject Site Vicinity Map**	Project No. 95117.25	Figure 1
1055 Eastshore Highway Albany, California			Scale *1" = 1300'*



AllWest Environmental, Inc.	November 1992	Initial Excavation	Project 92063.24	Figure 2
	1055 East Shore Highway, Albany, California			Source AllWest

2

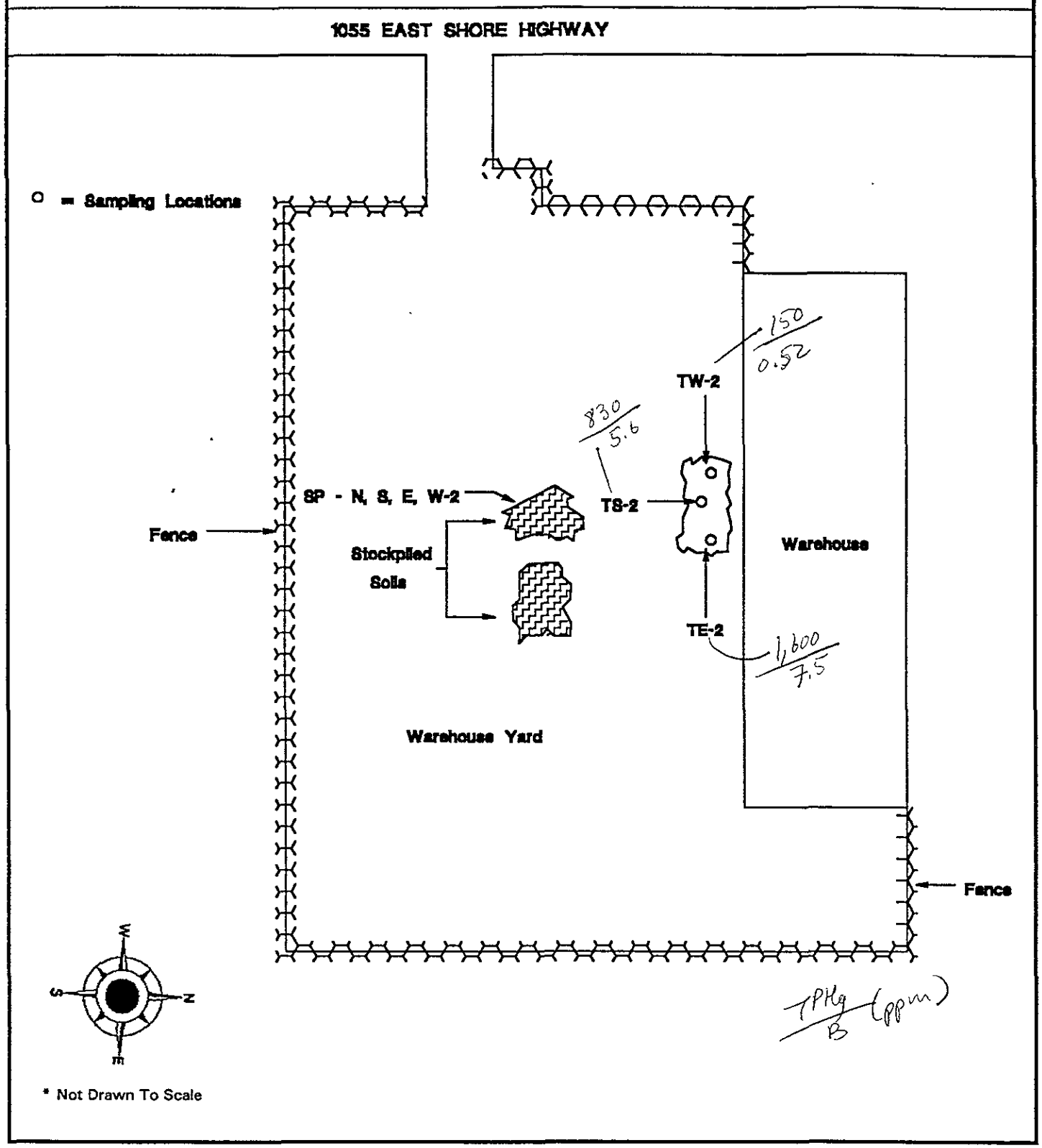
TABLE I

INITIAL EXCAVATION
SUMMARY OF ANALYTICAL RESULTS
MINIMUM VERIFICATION ANALYSIS

Sample	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Total Lead
S-1 West (Soil)	8.0	0.2	0.032	0.21	0.44	7.0
S-2 East (Soil)	120	0.49	5.7	2.7	13	5.1
W-1 CTR (Water)	93 93,000ppb	1.5 1,500ppb	3.1 etc.	2.3	12.0	ND
SP-W,S,E,N	61	0.071	0.96	0.44	5.8	12.0

Notes:

1. ND - Non-detected
2. All results are in parts per million (ppm).



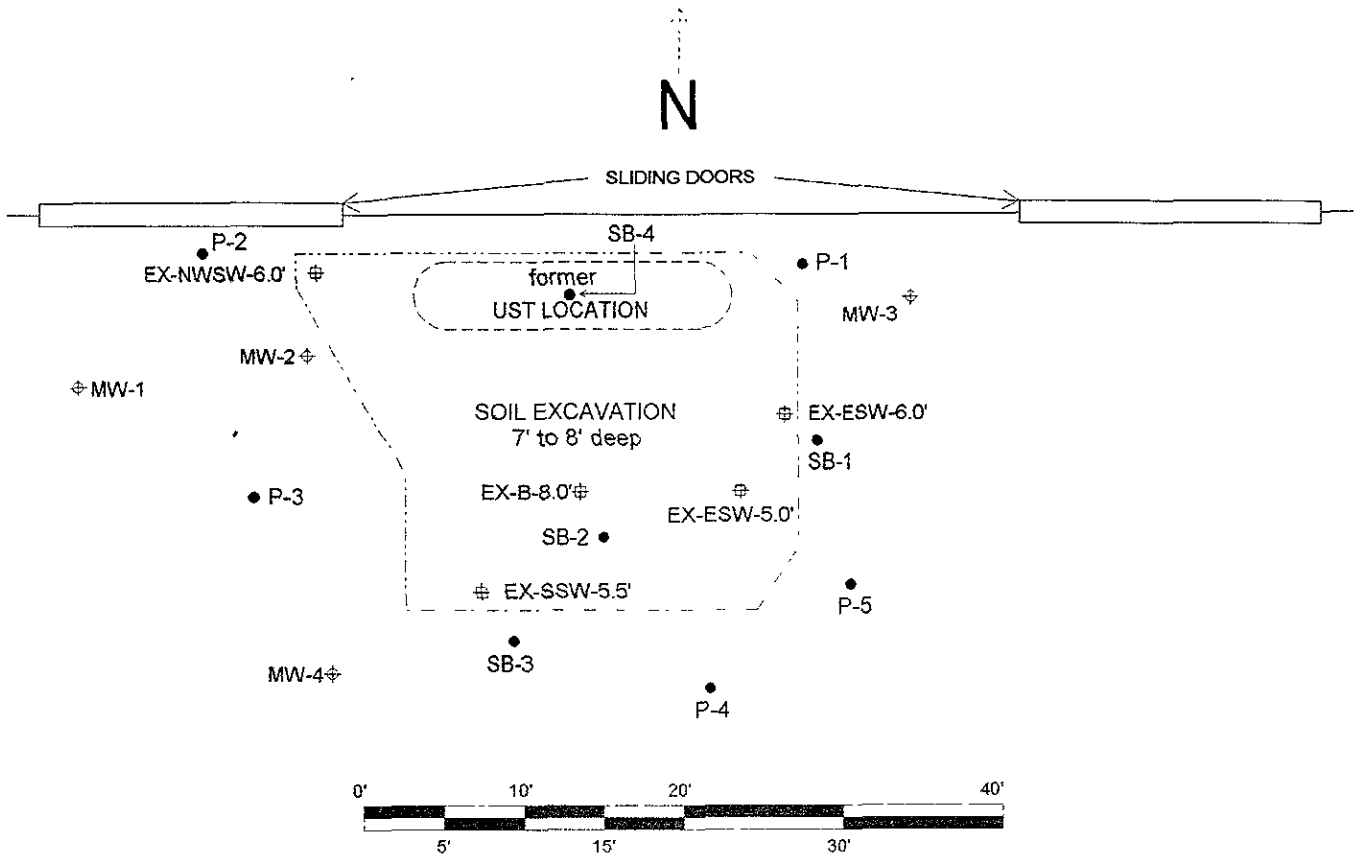
AllWest Environmental, Inc.	November 1992	Over Excavation	Project 92063.24	Figure 43
	1055 East Shore Highway, Albany, California			Source AllWest

TABLE 2

OVER
~~INITIAL~~ EXCAVATION
SUMMARY OF ANALYTICAL RESULTS

Sample Lead	TPH-G	Benzene	Toluene	Ethylbenzene	Xylenes	Total
TS-2	830	5.6	6.3	21	110	N/D
~~TS-2~~ TB-2	1600	7.5	49	42	210	N/D
TW-2	150	0.52	3.3	3.3	15	N/D
SP-N,S,E,W-2	210	N/D	1.9	3.1	17	N/D

Notes:
1. ND - Non-detected
2. All results are in parts per million (ppm).



AllWest

March 1996

Excavation Limits & Soil Sample Location Map

Project 95117.25

Figure 4a

1055 Eastshore Highway
Albany, California

Source *AllWest*

TABLE 3 SOIL SAMPLING RESULTS June 28, 1994					
Sample ID	**TPH-G**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**
SB1-5'	14	0.33	0.013	0.70	0.85
SB1-10'	ND	ND	ND	ND	ND
SB2-5'	2,000	5.90	74.0	63.0	360
SB2-10'	ND	ND	ND	ND	ND
SB3-5'	5.5	ND	0.0081	0.029	0.078
SB3-10'	ND	ND	ND	ND	ND
SB4-5'	39	0.023	0.19	0.44	2.5
SB4-10'	ND	0.021	ND	0.0085	0.019
MW1-5'	ND	ND	ND	ND	ND
MW1-10'	ND	ND	ND	ND	ND
MW2-5'	ND	ND	ND	ND	ND
MW2-10'	32	0.028	0.590	0.980	3.90
MW3-5'	ND	ND	ND	ND	ND
MW3-10'	ND	ND	ND	ND	ND
Detection Limit	**1.0 ppm**	**0.005 ppm**	**0.005 ppm**	**0.005 ppm**	**0.01 ppm**

Note: All concentrations reported in parts per million. mg/kg = ppm
ND = Not detected

AMER

Advanced Materials Engineering Research, Inc.

Table 4

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
AllWest Environmental, Inc.
One Sutter Street, Suite 600
San Francisco, CA 94104
MATRIX: SOIL
PROJECT MANAGER: Long Ching
PROJECT: ALBANY, #94265.23

DATE SAMPLED: 5-18-95
DATE RECEIVED: 5-19-95
DATE REPORTED:5-26-95
AMER ID: E1085

Client I.D.	AMER I.D.	8015M/ TPH-GASOLINE	DF
P-1-5	E5051902	**1.6**	1
P-1-7	E5051903	**2.4**	1
P-2-5	E5051906	ND	1
P-2-7	E5051907	ND	1
P-3-5.5	E5051910	ND	1
Units		mg/kg	
Method Detection Limit		1 mg/kg	

ND Not Detected. All analytes recorded as ND were found to be at or below the detection limit.
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.

Reviewed By

Lei Chen, Laboratory Manager

AMER

Advanced Materials Engineering Research, Inc.

Cont. Table 4

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8020

CLIENT:
AllWest Environmental, Inc.
One Sutter Street, Suite 600
San Francisco, CA 94104
MATRIX: SOIL
PROJECT MANAGER: Long Ching
PROJECT: ALBANY, #94265.23

DATE SAMPLED: 5-18-95
DATE RECEIVED: 5-19-95
DATE REPORTED:5-26-95
AMER ID: E1085

Client I.D.	AMER I.D.	Benzene	Toluene	Ethyl Benzene	Total Xylene	DF
P-1-5	E5051902	**8.7**	ND	**23**	**60**	1
P-1-7	E5051903	**72**	ND	**22**	**11**	1
P-2-5	E5051906	ND	ND	ND	ND	1
P-2-7	E5051907	ND	ND	ND	ND	1
P-3-5.5	E5051910	ND	ND	ND	ND	1
Units		ug/kg	ug/kg	ug/kg	ug/kg	
Method Detection Limits		5.0ug/kg	5.0ug/kg	5.0ug/kg	5.0ug/kg	

ND Not Detected. All analytes recorded as ND were found to be at or below the detection limit.
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.

Reviewed By

Lei Chen, Laboratory Manager

AMER
Advanced Materials Engineering Research, Inc.

cont. Table 4

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8015M

CLIENT:
AllWest Environmental, Inc.
One Sutter Street, Suite 600
San Francisco, CA 94104
MATRIX: SOIL
PROJECT MANAGER: Long Ching
PROJECT: ALBANY, #94265.23

DATE SAMPLED: 5-18-95
DATE RECEIVED: 5-19-95
DATE REPORTED:5-26-95
AMER ID: E1085

Client I.D.	AMER I.D.	8015M/ TPH-GASOLINE	DF
P-3-7	E5051911	**1.5**	1
P-4-5.5	E5051914	**35**	1
P-4-7.5	E5051915	**1.5**	1
P-5-5.5	E5051918	ND	1
P-5-7	E5051919	ND	1
Units		mg/kg	
Method Detection Limit		1 mg/kg	

ND Not Detected. All analytes recorded as ND were found to be at or below the detection limit. Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.

Reviewed By

Lei Chen, Laboratory Manager

AMER

Advanced Materials Engineering Research, Inc.

cont. Table 4

ANALYSIS REPORT
(ELAP Certificate No. 1909)
EPA METHOD 8020

CLIENT:
AllWest Environmental, Inc.
One Sutter Street, Suite 600
San Francisco, CA 94104
MATRIX: SOIL
PROJECT MANAGER: Long Ching
PROJECT: ALBANY, #94265.23

DATE SAMPLED: 5-18-95
DATE RECEIVED: 5-19-95
DATE REPORTED:5-26-95
AMER ID: E1085

Client I.D.	AMER I.D.	Benzene	Toluene	Ethyl Benzene	Total Xylene	DF
P-3-7	E5051911	ND	ND	ND	ND	1
P-4-5.5	E5051914	ND	ND	ND	ND	1
P-4-7.5	E5051915	ND	ND	ND	ND	1
P-5-5.5	E5051918	ND	ND	ND	ND	1
P-5-7	E5051919	ND	ND	ND	ND	1
Units		ug/kg	ug/kg	ug/kg	ug/kg	
Method Detection Limits		5.0ug/kg	5.0ug/kg	5.0ug/kg	5.0ug/kg	

ND Not Detected. All analytes recorded as ND were found to be at or below the detection limit.
Sample Detection Limit is equal to the Method Detection Limit X the Dilution Factor.

Reviewed By

Lei Chen, Laboratory Manager

AllWest

TABLE 5
ANALYTICAL RESULTS OF SOIL VERIFICATION SAMPLES
1055 Eastshore Highway
Albany, California

Sample Identification	Sample Date	TPH-g	BENZENE	TOLUENE	ETHYLBENZENE	XYLENE
EXB-8.5'	10-6-95	ND	ND	ND	ND	ND
EX-SSW-5.5'	10-6-95	66	55	28	46	320
*EX-ESW-5.0'	10-6-95	4,800	9,600	47,000	82,000	200,000
EX-ESW-6.0'	10-12-95	9	7	8	15	ND
EX-NWSW-6.0'	10-12-95	1	ND	ND	ND	ND

Notes: ND - None Detected at or above the laboratory limit of detection.
TPH-g - Total Petroleum Hydrocarbon as gasoline by EPA Method 8015 (modified)
BTEX - Benzene, Toluene, Ethylbenzene, and Xylene by EPA Method 8020
SW - Side Wall Sample
B - Bottom Sample
*Sample EX-ESW-5.0' is an preliminary verification sample. Sample EX-ESW-6.0' is the final verification sample after further excavation.
All concentrations for TPH-g were reported as mg/kg equivalent to parts per million (ppm).
All concentration for BTEX were reported as µg/kg equivalent to parts per billion (ppb).

2/1/96
Per RBCA, .05 ppm of benzene is acceptable for soil leachate to groundwater for 10^{-6} Risk in commercial/industrial scenario. -JMS
Hourglass Excavation did not

TABLE 2 6
CUMULATIVE SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

1055 Eastshore Highway
Albany, California

Monitoring Well No. and Sampling Date	TPH-Gasoline	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1						
6/23/94	ND (<50)	NA	ND (<0.3)	0.60	2.5	9.0
6/29/95	ND (<50)	NA	0.8	ND (<0.5)	1.3	3.2
9/7/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
12/20/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
3/22/96	ND (<50)	NA	ND (<0.5)	2.5	ND (<0.5)	2.2
6/21/96	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
9/17/96	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
1/17/97	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
4/11/97	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
8/1/97	ND (<50)	ND (2.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
MW-2						
6/23/94	330	NA	130	11	20	10
6/29/95	3,800	NA	260	9.8	190	310
9/7/95	2,700	NA	100	1.9	92	210
12/20/95	1,500	NA	170	50	30	170
3/22/96	4,500	NA	920	30	360	1,300
6/21/96	1,100	NA	140	1.6	62	160
9/17/96	190	NA	9.0	8.2	10	26
1/17/97	9,700	NA	1,200	140	440	1,300
4/11/97	4,000	NA	520	4.8	120	180
8/1/97	600	ND (2.5)	8.8	ND (<0.5)	18	16
MW-3						
6/23/94	52.0	NA	ND (<0.3)	ND (<0.3)	4.0	13
6/29/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
9/7/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
12/20/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
3/22/96	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
6/21/96	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
9/17/96	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
1/17/97	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
4/11/97	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
8/1/97	ND (<50)	ND (2.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)

cont. Table 6

Monitoring Well No. and Sampling Date	TPH-Gasoline	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-4						
6/29/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
9/7/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
12/20/95	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
3/22/96	60	NA	0.8	2.8	1.1-ppb	4.7
6/21/96	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
9/17/96	ND (<50)	NA	ND (<0.5)	2.3	ND (<0.5)	1.4
1/17/97	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
4/11/97	ND (<50)	NA	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)
8/1/97	ND (<50)	ND (2.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)	ND (<0.5)

Notes:

1. ND = Not-detected at or above the laboratory reporting limit indicated in parenthesis.
2. All numerical values are in units of μg/L, approximately equivalent to ppb.
3. MW-4 installed June 1995.
4. NA = Not Analyzed that sampling event.

AllWest
AllWest Environmental, Inc.

Log of Boring: SB-1

Sheet 1 of 1

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 24, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			1			Concrete, 6"
			2		ML	Sandy silt and gravel, well graded, yelowish brown, gravel size ~ 16 mm, subangular (base rock)
2 2 3	153		3 4 5		OL	Silty sand, poorly graded, black, organic matter abundant, medium plasticity, firm, damp to moist, modedrate odor
			6 7 8		SM	Silty sand, fine-grained, poorly graded, yelowish brown, medium dense, damp no odor
3 7 10	0		9 10 11 12 13 14 15 16 17 18 19 20 21			

Boring terminated at 10'.
Borehole grouted to surface.

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Log of Boring: SB-2

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 24, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			1			Concrete, 6"
			2		ML	Sandy silt and gravel, well graded, yelowish brown (base rock)
			3			
3			4			
2	188		5		OL	Silty sand, poorly graded, black, organic matter abundant, medium plasticity, soft to firm, moist, soil discoloration, modedrate odor
2			6			
			7			
			8		SP	Sand, fine-grained, poorly graded,minor coarse sand, yelowish brown, medium dense, damp no odor
6			9			
8	35		10			
10			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			

Boring terminated at 10'.
Borehole grouted to surface.

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Log of Boring: SB-3

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 24, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			1			Concrete, 6"
			2		ML	Sandy silt and gravel, well graded, yelowish brown (base rock)
			3		SM	Silty sand,coarse-grained, poorly graded, yellowish brown with streaks of grey, soft, damp, soil discoloration, modedrate odor
5 3 2	15.4		4			
			5		OL	Organic sandy silt, black, firm, damp to moist, no odor
			6			
			7			
			8		SM	Silty sand, fine-grained, poorly graded, yelowish brown with streaks of grey, damp, no odor
5 7 10	0		9			
			10			
			11			
			12			
			13			
			14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			

Boring terminated at 10'.
Borehole grouted to surface.

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Log of Boring: SB-4 (Slant Boring)

Sheet 1 of 1

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 24, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			1			Concrete, 6"
			2		GW SW	Sand with gravel, fine-grained sand, well graded (base rock > backfill of foremr excavtion)
3 4 3	235		3 4 5 6 7		SP	Sand, fine-grained, minor gravel, poorly graded, yellowish brown, loose, damp, slight to moderate odor
5 8 12	120		8 9 10 11 12		GP	Sandy gravel, coarse-grained sand, poorly graded, brownish grey, medium dense, damp to moist, slight odor Soil discoloration at 9' with moderate odor
7 9 10	0		13 14 15	▽	SW	Sand, minor gravel, fine-grained, well graded, brownish grey, medium dense, wet, no odor Gravel layer at 13.5-14', subangular to rounded, approximate size ~6 to 9 mm
			16 17 18 19 20 21			

Boring terminated at 15'.
Borehole grouted to surface.
Groundwater encountered during drilling at 13'.

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Log of Boring: MW-1

Sheet 1 of 2

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 23, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			0			Concrete, 6"
			1		SP	Sand, fine grained, poorly graded, yelowish brown, damp (base rock)
			2			
			3			
5 10 16	0		4		OL	Organic silty sand and clay, minor gravel, dark brown, very stiff, damp to moist, no odor
			5			
			6			
			7			
			8			
6 8 9	0		9		ML	Sandy silt, fine-grained, poorly graded, yelowish brown, medium dense, damp no odor
			10			
			11			
			12			
			13			
4 6 8	0	▽	14		SP	Sand, fine-grained, poorly graded, yelowish brown, medium dense, very moist, no odor
			15			
			16			
			17			
			18			
5 7 9	0		19		SP	Silty sand, fine grained, poorly graded, yellowish brown, saturated, no odor
			20			
			21			

Boring log continues on next sheet.
Boring converted into monitoring well

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Log of Boring: MW-1

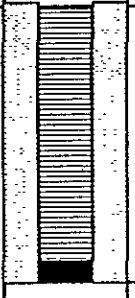
Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 23, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			21		SM	Silty sand, fine grained, poorly graded, yellowish brown, saturated, no odor
			22			
			23			
			24			
			25			
			26			
			27			
			28			
			29			
			30			
			31			
			32			
			33			
			34			
			35			
			36			
			37			
			38			
			39			
			40			
			41			

Boring terminated at 25'.
Boring converted into monitoring well.

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Log of Boring: MW-2

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 23, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
						Concrete, 6"
			1	Grout	ML	Sandy silt, dark brown, med. plasticity, damp, no odor (base rock)
			2			
			3	Bentonite		
3 4 5	6		4		SP	Sand, minor gravel, poorly graded, geyish brown, loose, damp, no odor
			5			
			6			
			7		CH	Silty clay, brownish grey, very stiff, medium to high plasticity, damp, slight odor
			8	Screen		
			9	Sand		
4 12 16	138		10			
			11			
			12		SM	Silty sand, fine-grained, poorly graded, yellowish brown, medium dense, moist to wet, no odor
			13			
6 8 9	2.3		14			
			15			
			16			
			17			
			18			
			19			
			20			
			21			

Boring terminated at 19.5'. Boring converted into monitoring well. Groundwater encountered at approximately 12' during drilling. Thereafter, it stabilized at around 7'.

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Log of Boring: MW-3

Sheet 1 of 1

Project Name: 1055 Eastshore Highway, Albany

Project Number: 93070.23

Drilling Date: June 23, 1994

Drilling Contractor: Soils Exploration Services
Drill Rig: CME-75
Auger: Hollow Stem - 8" O.D.

Sampler: 2.0" Mod. California Sampler
Hammer: 140 lbs - 30" drop
Logged By: Anibal Mata-Sol

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
						Concrete, 6"
			1	Grout	ML	Sandy silt, poorly graded, dark brown, damp (base rock)
			2			
			3	Bentonite		
2			4			
2	0		5		OL	Organic sandy silt, poorly graded, greyish black, medium to high plasticity, firm, damp, no odor
3		▼	6			
			7			
			8			
5			9			
8	0		10	Screen / Sand		
10			11			
			12		SP	*Sand, fine-grained, poorly graded, minor silt, yelowish brown,* medium dense, damp no odor
			13			
3		▽	14			
6	0		15			
11			16			
			17			
6			18		GW SW	Gravel and sand mixture, coarse grained sand, well graded, medium dense, gravel up to 14 mm and subangular, wet, no odor
8	0		19		Bentonite	
9			20			
			21			

Boring terminated at 19.5'
Bottom of well plugged with 2' of bentonite.

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Log of Boring: MW-4
Project Name: X Well
Project Number: 95117.23
Drilling Date: June 17, 1995

Drilling Contractor: Bay Area Exploration
Drill Rig: 540 Hollow Stem Auger
Auger: 8-inch Hollow Stem Auger

Sampler: California Modified Split Spoon
Hammer: 140 lbs. with 18-inch drop
Logged By: Keith Craig

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			1	Christy Box, Locking Cap, Grout		6" concrete 6" of baserock
2 4 4	ND		2 3		GW	Dark gray, sandy gravel (GW) moderately dense, moist, oily, slight odor.
	ND		4 5	Grout, Blank casing	CL	Dark gray, silty clay, (CL) soft, wet, with gravely clay denses. (fill) oil, slight odor.
3 6 10			6 7 8	Bentonite		Moderate brown sandy clay, (CL-CH) stiff, wet to saturated, mottled, slight black.
6 8 10	ND		9 10 11	Sand pack	CL-CH	Very stiff clay at 12'.
			12 13 14	Slotted PVC casing		
6 8 10	ND		15 16	Sand pack		
			17 18 19		CL	Increases sand content 30-40% from 18' to 22'.
9 15 18	ND		20 21			

Other well logs also had signs of semi-confined conditions.

ND = Not detected by the Organic Vapor Meter (OVM)

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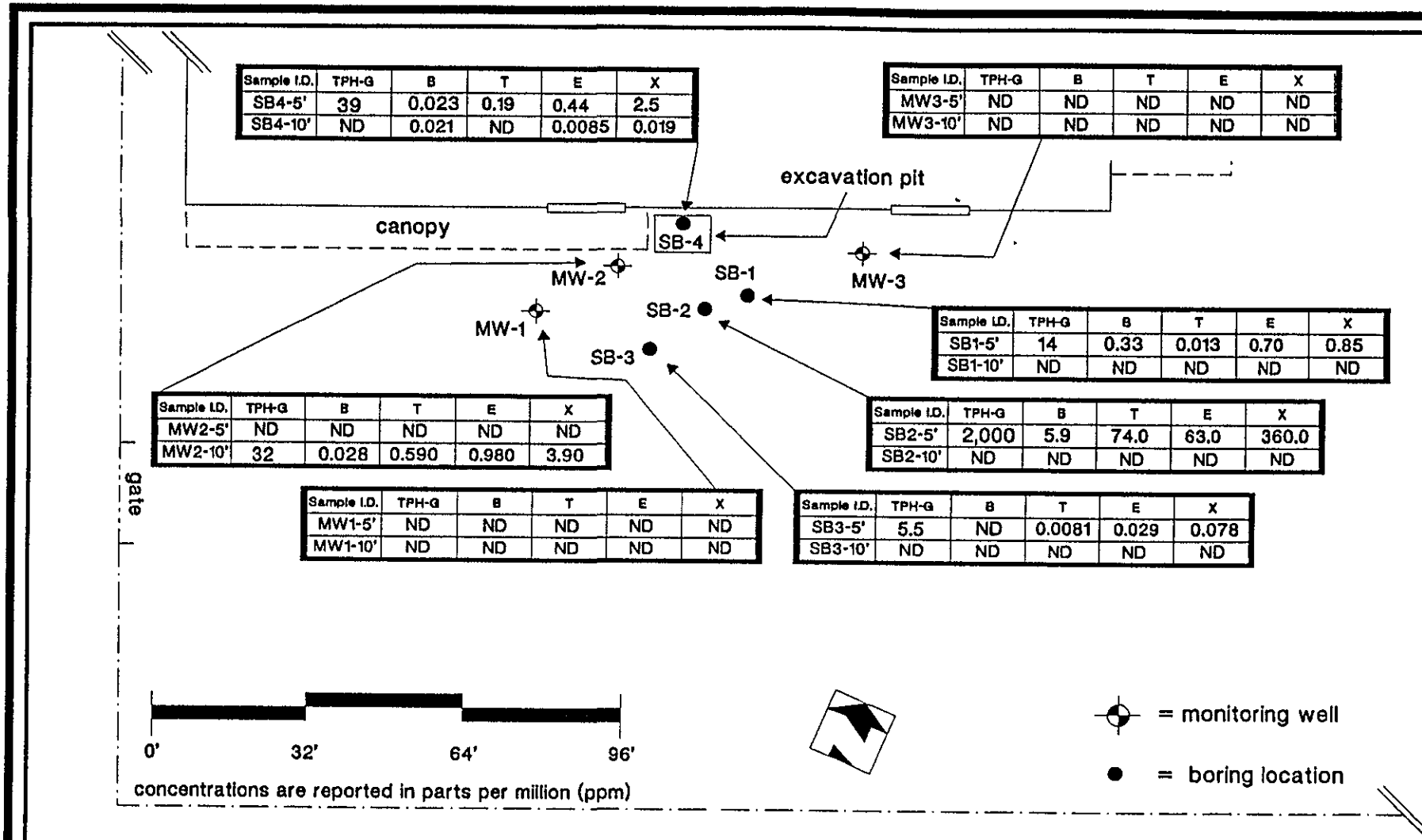
Log of Boring: MW-4
Project Name: X Well
Project Number: 95117.23
Drilling Date: June 17, 1995

Blow Count	OVM Reading	Sample Interval	Depth in Feet	Well Profile	USCS Code	Soil Description
			20			Groundwater encountered at 21', saturated.
			21			
			22		CL	
			23			
			24			Increase to 30% sand at 24'.
8			25			
10	ND		26			
18				End Cap		Borehole terminated at 26.0'.
			27			Groundwater encountered at 21'.
			28			Rose to 4.5'.
			29			
			30			
			31			
			32			
			33			
			34			
			35			
			36			
			37			
			38			
			39			
			40			



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July 1994	TPH Concentrations in Site's Soil	Project 93070.23	Figure 5
1055 East Shore Highway, Albany, California			Source *AllWest*