



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 149 - 10626 E 14th Street, Oakland, CA
(9 underground storage tanks removed in December 1997)**

February 19, 1999

Ms. Suzanne Patton
AC Transit
10626 E 14th Street
Oakland, CA 94603

Dear Ms. Patton:

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
Leroy Griffin, OFD
files-ec (actransit-5)

RB#01-2265

CASE CLOSURE SUMMARY
Leaking Underground Fuel Storage Tank Program

CALIFORNIA REGIONAL WATER
QUALITY CONTROL BOARD
FEB 08 1999

I. AGENCY INFORMATION

Date: December 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: **AC Transit**

Site facility address: **10626 E 14th Street, Oakland, CA 94603**

RB LUSTIS Case No: **N/A**

Local Case No./LOP Case No.: **149**

URF filing date: **5/30/97**

SWEEPS No: **N/A**

Responsible Parties:

Addresses:

Phone Numbers:

Suzanne Patton
AC Transit
10626 E 14th Street
Oakland, CA 94603
510/577-8869

| <u>Tank No:</u> | <u>Size in gal.:</u> | <u>Contents:</u> | <u>Closed in-place or removed?:</u> | <u>Date:</u> |
|-----------------|----------------------|--------------------|-------------------------------------|--------------|
| 1 | 6,000 | Transmission Fluid | Removed | 12/10/97 |
| 2 | 6,000 | Mineral Spirits | " | " |
| 3 | 6,000 | Motor Oil | " | " |
| 4 | 1,000 | Waste Oil | " | " |
| 5 | 1,000 | Paint Waste | " | " |
| 6 | 2,000 | Waste Oil | " | 12/11/97 |
| 7 | 2,000 | Waste Coolant | " | " |
| 8 | 2,000 | Waste Solvent | " | " |
| 9 | 2,000 | Caustic Solution | " | " |

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: **Unknown**

Site characterization complete? **YES**

Date approved by oversight agency: **12/21/98**

Monitoring Wells installed? **No** Number:

Proper screened interval? **NA**

Highest GW depth below ground surface: **Groundwater first encountered at ~22' to 28'bgs**

Flow direction: **Regional groundwater flows to the west, southwest. Groundwater at 10500 E. 14th Street, Oakland also flowed WSW.**

Most sensitive current use: **Commercial/Industrial**

Are drinking water wells affected? **No** Aquifer name: **NA**

Is surface water affected? **No** Nearest affected SW name: **NA**

Off-site beneficial use impacts (addresses/locations): **None**

Report(s) on file? **YES** Where is report(s) filed? **Alameda County** **Oakland Fire Dept**
1131 Harbor Bay Pkwy and **505 14th St, Ste 510**
Alameda, CA 94502 **Oakland, CA 94612**

Treatment and Disposal of Affected Material:

| <u>Material</u> | <u>Amount (include units)</u> | <u>Action (Treatment or Disposal w/destination)</u> | <u>Date</u> |
|-----------------|-----------------------------------|---|-------------|
| Tank | 9 USTs | Disposed at Erickson, in Richmond, CA | Dec 1997 |
| Soil | 560 cy | Disposed at BFI Vasco Road L.F., Livermore | Jan 1998 |

Maximum Documented Contaminant Concentrations - - Before and After Cleanup

| Contaminant | Soil (ppm) | | Water (ppb) | |
|-----------------|-----------------------------------|--------------------|---------------------|--------------------|
| | Before ¹ | After ² | Before ³ | After ⁴ |
| TPH (Gas) | 9.1 | 9.1 | ND | |
| TPH (Diesel) | 9 | 9 | ND | |
| Benzene | ND | ND | ND | |
| Toluene | .014 | .014 | ND | |
| Ethylbenzene | ND | ND | ND | |
| Xylenes | .53 | ND | ND | |
| MTBE | 3.1 | .013 | ND | |
| Oil & Grease | 30 | 40 | 2,000 | |
| Heavy metals | within acceptable geogenic levels | | | |
| Other HVOC/VOC | ND | see Note 5 | ND | |
| SVOC | ND | ND | ND | |
| Ethylene Glycol | ND | | | |

- NOTE: 1 soil sample collected at time of piping upgrade at Tank Farm 2 (May 1997) or at time of UST removal (Dec 1997)
- 2 soil samples from borings advanced in the vicinity of the former USTs
- 3 grab water samples from exploratory borings around the former USTs.
- 4 no permanent groundwater monitoring wells installed
- 5 0.14ppm 2-Butanone, 0.007ppm 1,2,4 trichlorobenzene, 0.07ppm butanone

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: **None**

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

Monitoring wells Decommissioned: **NA**

Number Decommissioned: _____ Number Retained: _____

List enforcement actions taken: **None**

List enforcement actions rescinded: **NA**

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: **Eva Chu**

Title: **Haz Mat Specialist**

Signature: 

Date: *1/28/99*

Reviewed by

Name: **Barney Chan**

Title: **Haz Mat Specialist**

Signature: 

Date: *12/31/98*

Name: **Thomas Peacock**

Title: **Supervisor**

Signature: 

Date: *1-28-99*


VI. RWQCB NOTIFICATION

Date Submitted to RB: *1/28/99*

RB Response:

RWQCB Staff Name: **Chuck Headlee**

Title: **EG**

Signature: 

Date: *2/8/99*

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is a central vehicle/bus maintenance facility for Alameda & Contra Costa Transit District. At the site are three tank farm areas (Tank Farm No. 1 through No. 3)

Tank Farm 2

Two USTs (1-6K gasoline and 1-10K diesel) are located at Tank Farm 2. In May 1997, while performing UST upgrades at Tank Farm 2, excavation in the area of the product line for the unleaded gasoline UST indicated there was a fuel release from a small hole in the piping elbow joint. The pipeline and joint were replaced. Approximately 27cy of impacted soil were excavated from the area. Analytical results of soil samples collected from the west sidewall and from the bottom of the excavation confirmed that most of the impacted soil was removed. (See Fig 1, 2A, 2B, and Table 1)

In September 1997, to further delineate the extent of soil contamination and its potential impact to groundwater quality, four direct-push exploratory borings (B-1 through B-4) were drilled to 24' to 28'bgs. Groundwater was encountered at ~26' to 28'bgs. Soil samples were collected at ~24' to 27'bgs. Grab groundwater samples were also collected from each boring. No significant levels of TPHg, BTEX, or MTBE were detected in the soil or groundwater samples. It appears that the gasoline release was confined to a small area that was remediated through excavation. No further action is required in this area. (See Fig 2C, Table 2, 3)

Tank Farm 1

Tank farm 1 had seven USTs (1-6K ATF, 1-6K mineral spirit, 1-6K engine oil, 1-1K waste oil, 1-1K paint waste, 1-2K waste oil, 1-2K waste coolant, 1-2K waste mineral spirit, and 1-2K caustic solution tank). Four were replaced with new USTs (engine oil, transmission fluid, new engine coolant, and waste oil) in December 1997. When the original seven USTs were removed, a total of nine soils samples (SW1 through SW7, and East and West) were collected at ~12.5' to 15'bgs. The samples were analyzed for TPHg, TPHd, TPHmo, TPH as transmission fluid, and BTEX. Soil samples near the waste oil tank were also analyzed for the five LUFT metals, VOCs and SVOCs. Sample SW5 was also analyzed for ethylene glycol. No significant levels of analytes sought were detected (see Fig 3, 4, Table 4, 5). Because there was obvious soil contamination noted in the tank pit, a groundwater investigation was required.

In August 1998 two exploratory borings, B12 and B13, were advanced at Tank Farm 1, adjacent to the former excavation. A soil sample was collected at 18'bgs in the capillary fringe from each boring. A grab water sample was collected from B13. The two soil and one water samples were analyzed for TPHd, TOG, and VOCs. Low to non-detectable levels of analytes were detected in soil and/or groundwater. It appears that historical releases from the USTs did not significantly impacted local soil and groundwater quality. No further action is required in this area. (See Fig 5, Table 6)

Tank Farm 3

Two USTs (1-1,000 gallon paint waste and 1-1,000 gallon waste oil) were removed from Tank Farm 3 in December 1997. A new waste oil UST was installed. Soil samples were not collected from the pit at the time of the tank removal.

In August 1998 two exploratory borings (B-10 and B-11) were advanced adjacent to the existing USTs. Groundwater was encountered at ~22'bgs. Soil samples were collected at 11' and 19'bgs. The four soil and one groundwater samples were analyzed for TPHd, TPHg, TOG, VOCs, SVOCs and the LUFT metals. Low or non-detectable levels of the analytes sought were detected. It appears the previous releases had not severely impacted soil and groundwater quality in this area. No further action is required. (See Table 6)

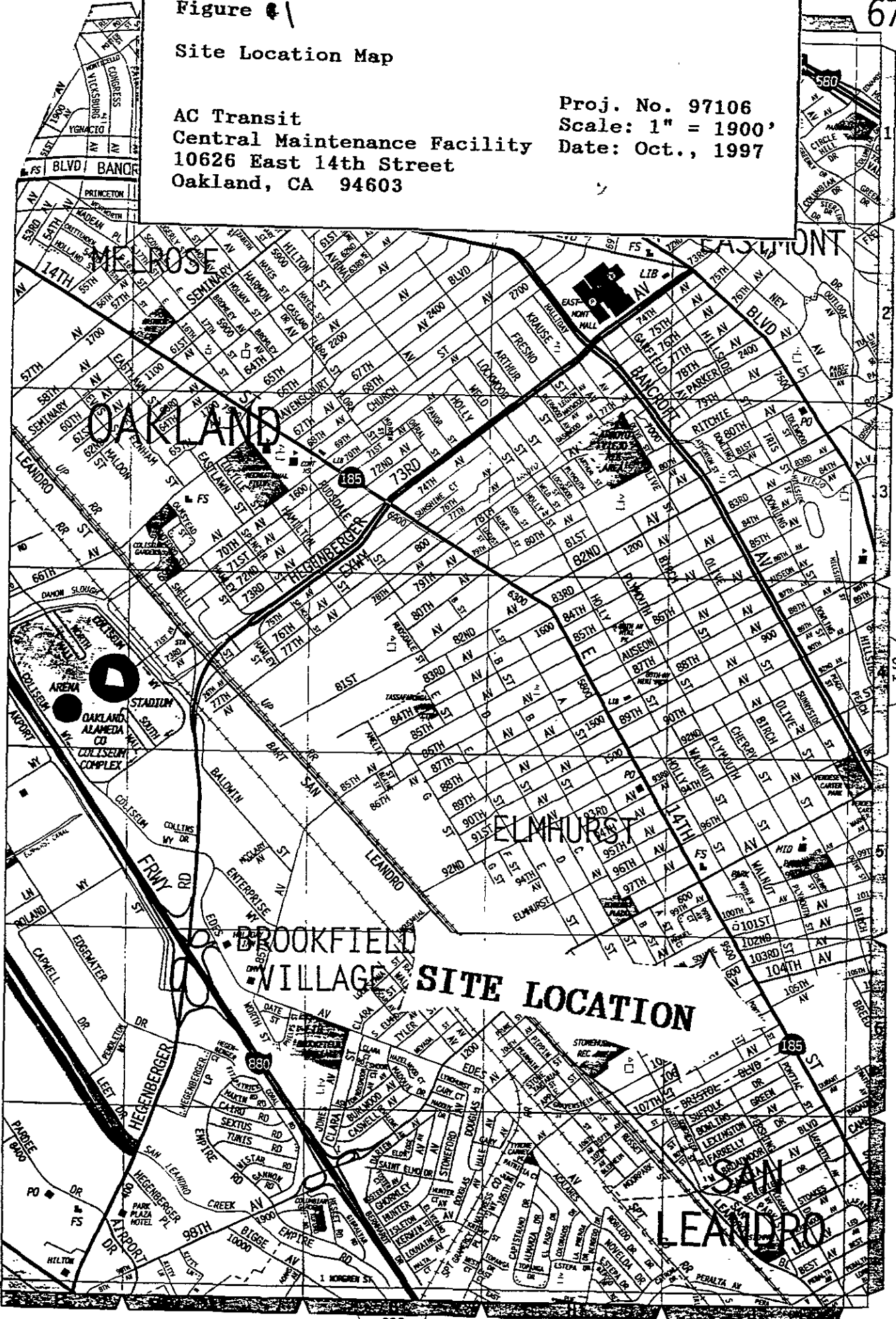
In summary, case closure is recommended because:

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

Figure 1
Site Location Map

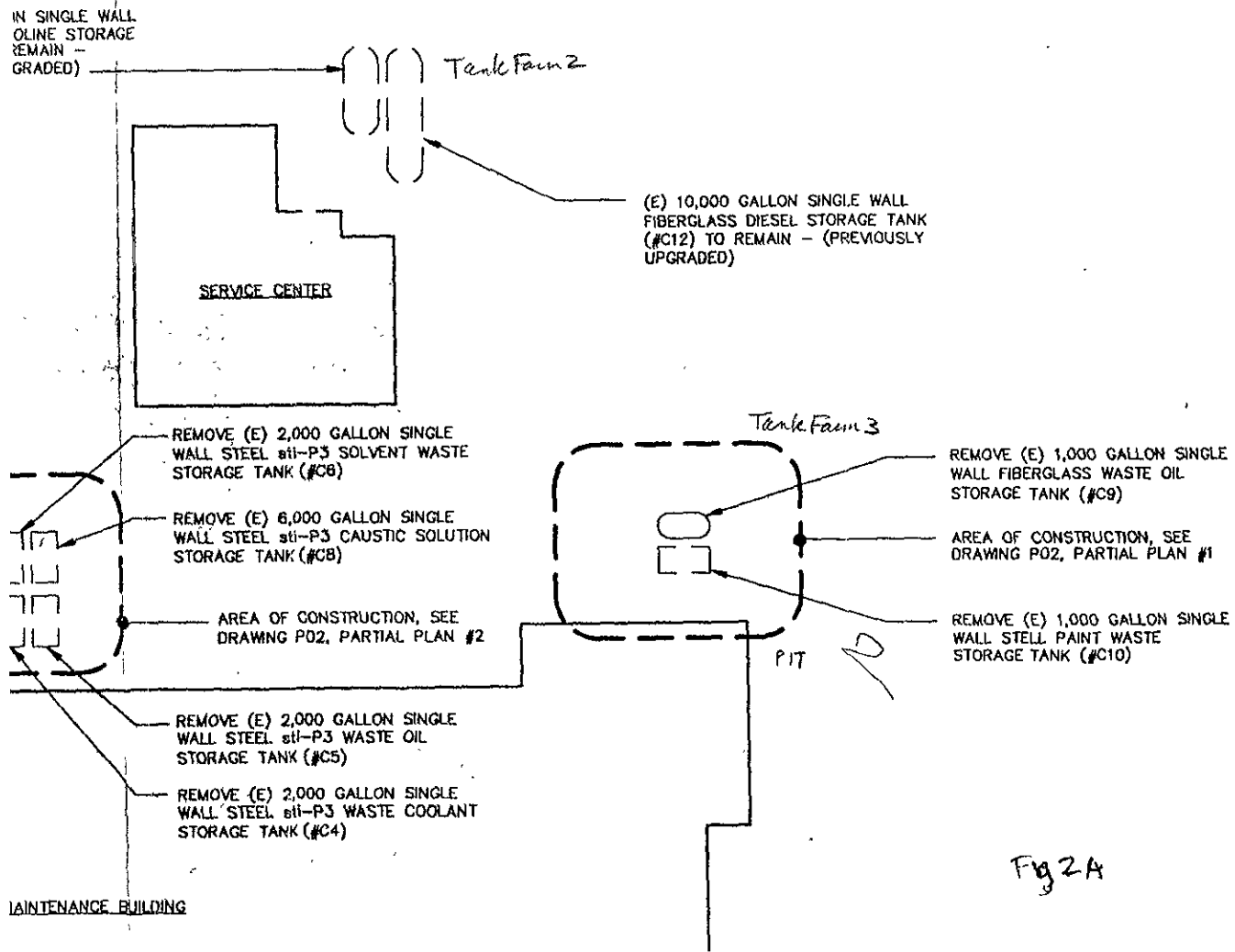
AC Transit
Central Maintenance Facility
10626 East 14th Street
Oakland, CA 94603

Proj. No. 97106
Scale: 1" = 1900'
Date: Oct., 1997



SEE 671 MAP

NUE



AC TRANS
E 14th 380-C
OAKLAND

AREA OF
EXCAVATION
CONTAMINATED
SOIL

BUS
WASH

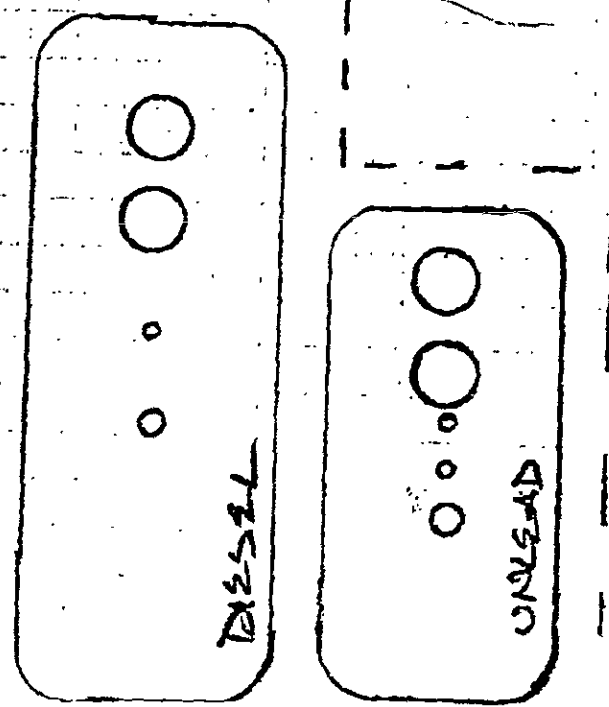
AREA OF
GAS PRODUCT LINE LEAK
24" DEPTH

AREA
OF
VAPOR
LINE
LEAK
26" DEPTH

EXCAVATED
AREA
TO 9'
DEPTH

STOCKPILE
TOTAL
APPROX 40 YDS

SAMPLES TAKEN
AT 6' & 9'



STOCKPILE

DALE BYERS

Figure 2B

POLYMATRIX ASSOCIATES

SAMPLE ID: SIDE WALL WEST
 AEN LAB NO: 9706049-01
 AEN WORK ORDER: 9706049
 CLIENT PROJ. ID: AC TRANSIT

DATE SAMPLED: 06/04/97
 DATE RECEIVED: 06/04/97
 REPORT DATE: 06/17/97

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|---------------------------|-----------------|---------|--------------------|-------|------------------|
| BTEX & Gasoline HCs | EPA 8020 | | | | |
| Benzene | 71-43-2 | ND | 50 | ug/kg | 06/11/97 |
| Toluene | 108-88-3 | ND | 50 | ug/kg | 06/11/97 |
| Ethylbenzene | 100-41-4 | ND | 50 | ug/kg | 06/11/97 |
| Xylenes, Total | 1330-20-7 | 530 * | 50 | ug/kg | 06/11/97 |
| Purgeable HCs as Gasoline | 5030/GCFID | 9.1 * | 2 | mg/kg | 06/11/97 |
| Methyl t-Butyl Ether | 1634-04-4 | 3,100 * | 500 | ug/kg | 06/11/97 |

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

POLYMATRIX ASSOCIATES

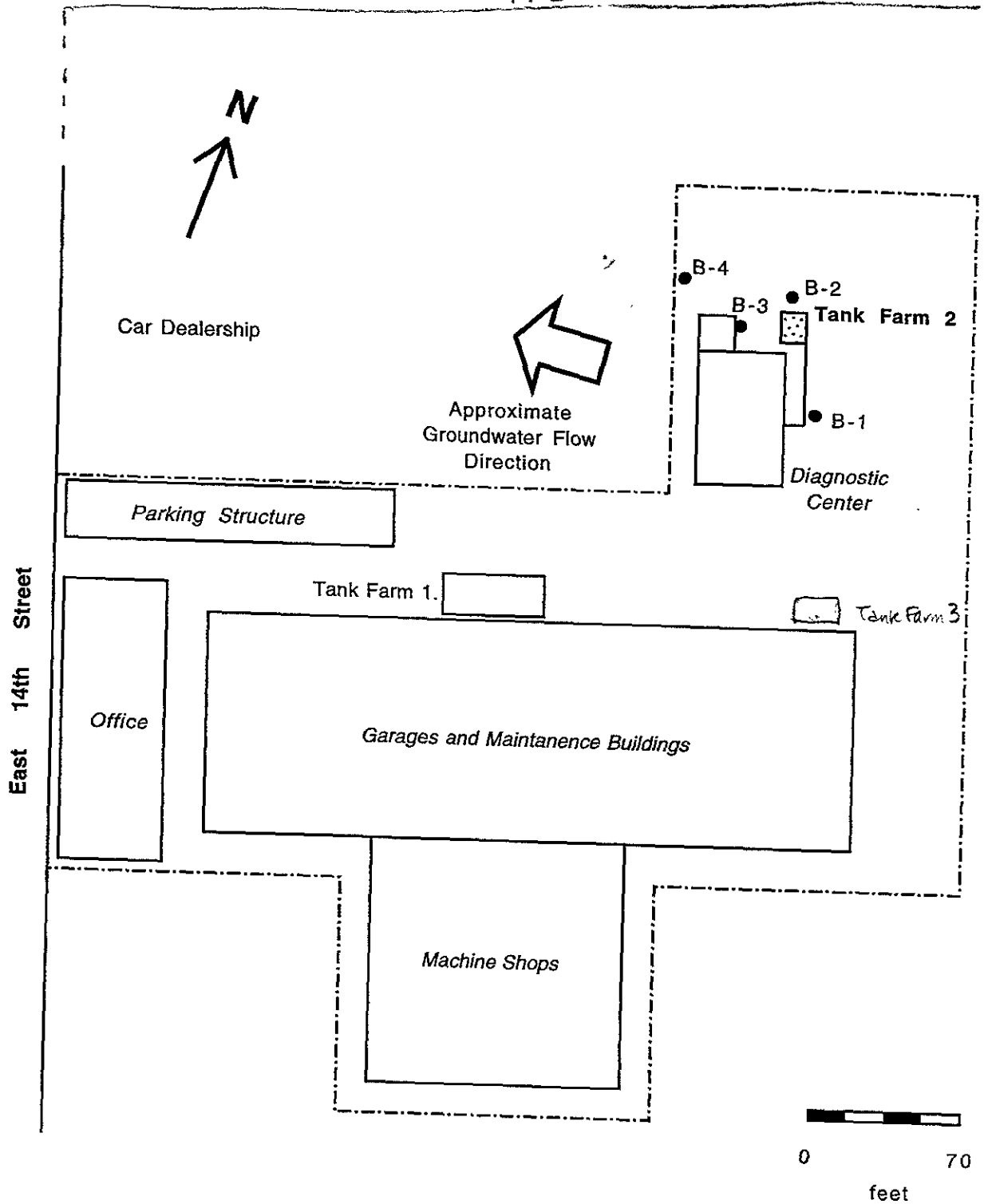
SAMPLE ID: BOTTOM
 AEN LAB NO: 9706049-02
 AEN WORK ORDER: 9706049
 CLIENT PROJ. ID: AC TRANSIT

DATE SAMPLED: 06/04/97
 DATE RECEIVED: 06/04/97
 REPORT DATE: 06/17/97

| ANALYTE | METHOD/ CAS# | RESULT | REPORTING LIMIT | UNITS | DATE ANALYZED |
|---------------------------|-----------------|---------|--------------------|-----------|------------------|
| BTEX & Gasoline HCs | EPA 8020 | | | | |
| Benzene | 71-43-2 | ND | | 5 ug/kg | 06/11/97 |
| Toluene | 108-88-3 | 14 * | | 5 ug/kg | 06/11/97 |
| Ethylbenzene | 100-41-4 | ND | | 5 ug/kg | 06/11/97 |
| Xylenes, Total | 1330-20-7 | ND | | 5 ug/kg | 06/11/97 |
| Purgeable HCs as Gasoline | 5030/GCFID | 0.2 * | | 0.2 mg/kg | 06/11/97 |
| Methyl t-Butyl Ether | 1634-04-4 | 1,100 * | | 50 ug/kg | 06/11/97 |

ND = Not detected at or above the reporting limit
 * = Value at or above reporting limit

105th Ave



B-1 ● Reconnaissance Borehole Location

Site Map with Reconnaissance Boring Locations

AC Transit
 Central Maintenance Facility
 10626 East 14th Street
 Oakland, CA

Proj. No. 97106
 Scale: 1" = 70'
 Date: Oct., 1997
 Figure 2C

Polymatrix Associates
 Hayward, CA

TABLE 1

Analytical Results for Soil - AC Transit, 10626 E. 14th St., Oakland, CA
Soil Samples Collected on September 12, 1997

| <u>Identification</u> | <u>Matrix</u> | <u>Depth</u> | <u>TPH-G</u> (ug/kg) | <u>Benzene</u> (ug/kg) | <u>Toluene</u> (ug/kg) | <u>Xylene</u> (ug/kg) | <u>Ethyl Benzene</u> (ug/kg) | <u>MTBE</u> (ug/kg) |
|----------------------------|---------------|--------------|-------------------------|---------------------------|---------------------------|--------------------------|---------------------------------|------------------------|
| SB-1-7 @ 24' | Soil | 24' | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| SB-2-7 @ 26' | Soil | 26' | N.D. | N.D. | 8 | N.D. | N.D. | N.D. |
| SB-3-7 @ 27' | Soil | 27' | N.D. | N.D. | 6 | N.D. | N.D. | N.D. |
| SB-4-7 @ 27' | Soil | 27' | N.D. | N.D. | 7 | N.D. | N.D. | N.D. |
| Analytical Detection Limit | | | 0.2 | 5 | 5 | 5 | 5 | 50 |

mg/kg = milligram/kilogram (ppm)
ug/kg = microgram/kilogram (ppb)
TPH-G = Total Petroleum Hydrocarbons as Gasoline
MTBE = Methyl-Tert-Butyl-Ether

TABLE 23

Analytical Results for Groundwater - AC Transit, 10626 E. 14th St., Oakland, CA

Groundwater Samples Collected on September 12, 1997

| <u>Identification</u> | <u>Matrix</u> | <u>Depth</u> | <u>TPH-G</u> | <u>Benzene</u> | <u>Toluene</u> | <u>Xylene</u> | <u>Ethyl Benzene</u> | <u>MTBE</u> |
|-----------------------------------|---------------|--------------|--------------|----------------|----------------|---------------|----------------------|-------------|
| | | | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) | (ug/kg) |
| SB-1 | GW | 20.80' | N.D. | N.D. | N.D. | N.D. | N.D. | 8 |
| SB-2 | GW | 20.45' | N.D. | N.D. | N.D. | N.D. | N.D. | N.D. |
| SB-3 | GW | 20.95' | N.D. | N.D. | N.D. | N.D. | N.D. | 19 |
| SB-4 | GW | 20.95' | N.D. | N.D. | N.D. | N.D. | N.D. | 6 |
| <u>Analytical Detection Limit</u> | | | 0.2 | 5 | 5 | 5 | 5 | 5 |

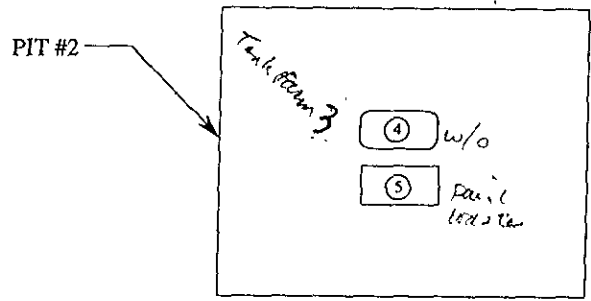
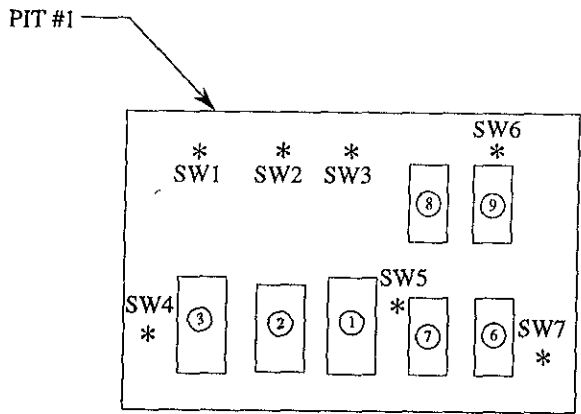
GW = Groundwater

mg/l = milligram/kilogram (ppm)

ug/l = microgram/kilogram (ppb)

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl-Tert-Butyl-Ether



MAINTENANCE BUILDING

LEGEND

- ① Tank Number
- * Soil Sample Location
- Tank #1 - 6,000-gallon Fiberglass ATF Tank
- Tank #2 - 6,000-gallon Steel Solvent Tank
- Tank #3 - 6,000-gallon Fiberglass Engine Oil Tank
- Tank #4 - 1,000-gallon Fiberglass Waste Oil Tank
- Tank #5 - 1,000-gallon Steel Paint Waste Tank
- Tank #6 - 2,000-gallon Fiberglass Waste Oil Tank
- Tank #7 - 2,000-gallon Fiberglass Waste Coolant Tank
- Tank #8 - 2,000-gallon Steel Waste Solvent Tank
- Tank #9 - 2,000-gallon Steel Caustic Solution Tank

SOIL SAMPLE LOCATION MAP



AC TRANSIT YARD
 10626 EAST 14TH STREET
 OAKLAND, CALIFORNIA

FIGURE 3
 1

KEI-J97-1201.R1
 December 12, 1997

Table 4

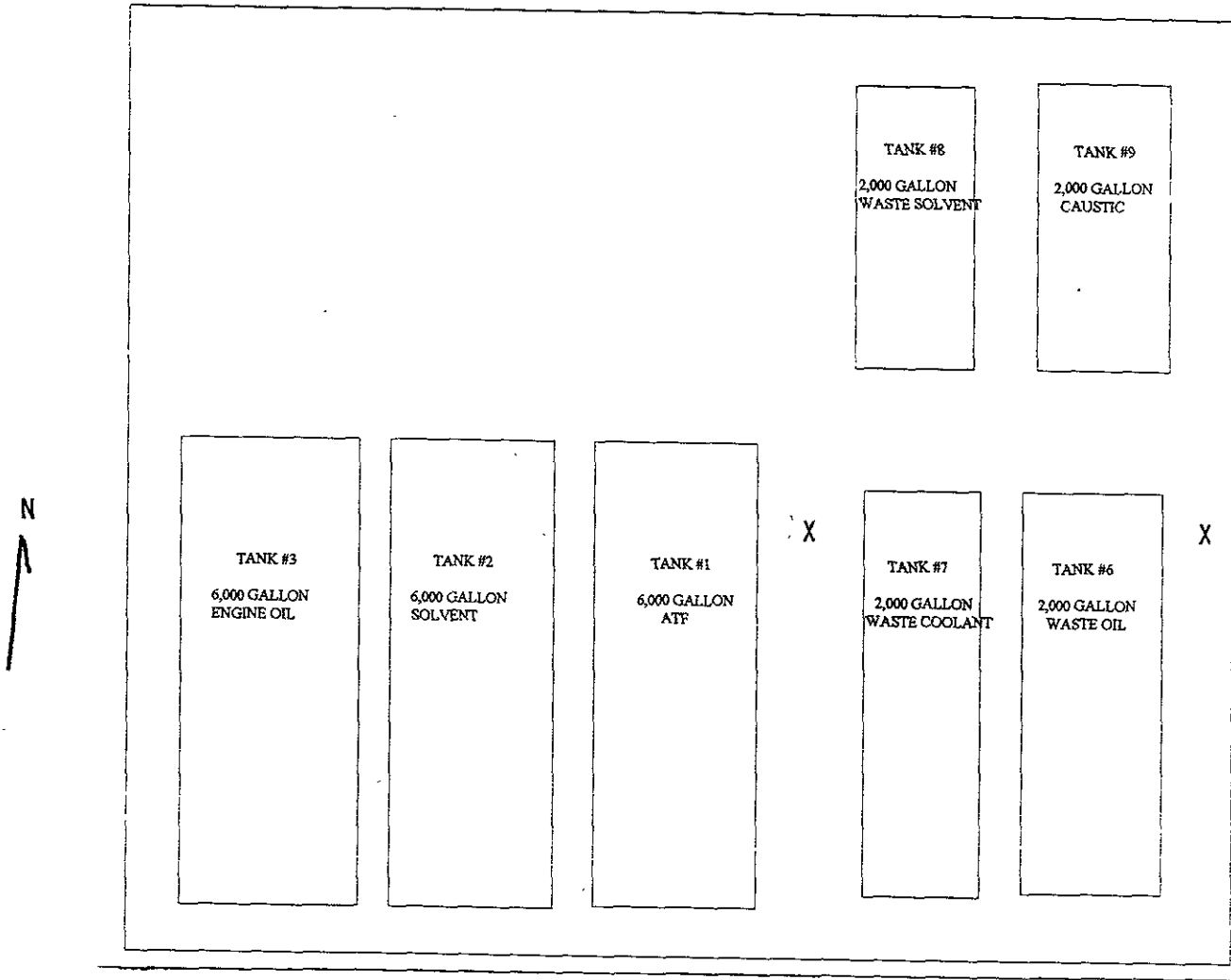
Summary of Analytical Results
 Soil

| <u>Date</u> | <u>Sample Number</u> | <u>Sample Depth</u> | <u>TPH as Motor Oil</u> | <u>TPH as ATF</u> | <u>TPH as Diesel</u> | <u>TPH as Gasoline</u> | <u>Benzene</u> | <u>Toluene</u> | <u>Ethyl-benzene</u> | <u>Xylenes</u> |
|-------------|----------------------|---------------------|-------------------------|-------------------|----------------------|------------------------|----------------|----------------|----------------------|----------------|
| 12/10/97 | SW1 | 12.5 feet | ND | ND | NA | ND | ND | ND | ND | ND |
| 12/10/97 | SW2 | 12.5 feet | NA | NA | NA | ND | ND | ND | ND | ND |
| 12/10/97 | SW3 | 12.5 feet | NA | ND | NA | ND | ND | ND | ND | ND |
| 12/10/97 | SW4 | 12.5 feet | ND | NA | NA | ND | ND | ND | ND | ND |
| 12/11/97 | SW6 | 12.5 feet | ND | NA | ND | ND | ND | ND | ND | ND |
| 12/11/97 | SW7 | 12.5 feet | NA | NA | ND | ND | ND | ND | ND | ND |

| <u>Date</u> | <u>Sample Number</u> | <u>Sample Depth</u> | <u>Ethylene Glycol</u> | <u>TOG</u> | <u>Cadmium</u> | <u>LUFT Metals</u> | | | <u>Zinc</u> | <u>EPA 8010 & 8270 Constituents</u> |
|-------------|----------------------|---------------------|------------------------|------------|----------------|--------------------|-------------|---------------|-------------|---|
| | | | | | | <u>Chromium</u> | <u>Lead</u> | <u>Nickel</u> | | |
| 12/11/97 | SW5 | 12.5 feet | ND | NA | ND | 38 | 3.3 | 48 | 49 | NA |
| 12/11/97 | SW7 | 12.5 feet | NA | ND | ND | 41 | 2.3 | 63 | 50 | ND |

ND = Non-detectable
 NA = Not analyzed
 ATF = Automatic Transmission Fluid
 TOG = Total Oil and Grease

FIGURE 4
SOIL SAMPLE LOCATION MAP
AC TRANSIT - CENTRAL MAINTENANCE FACILITY
10626 EAST 14th STREET
OAKLAND, CALIFORNIA



LENGEND:

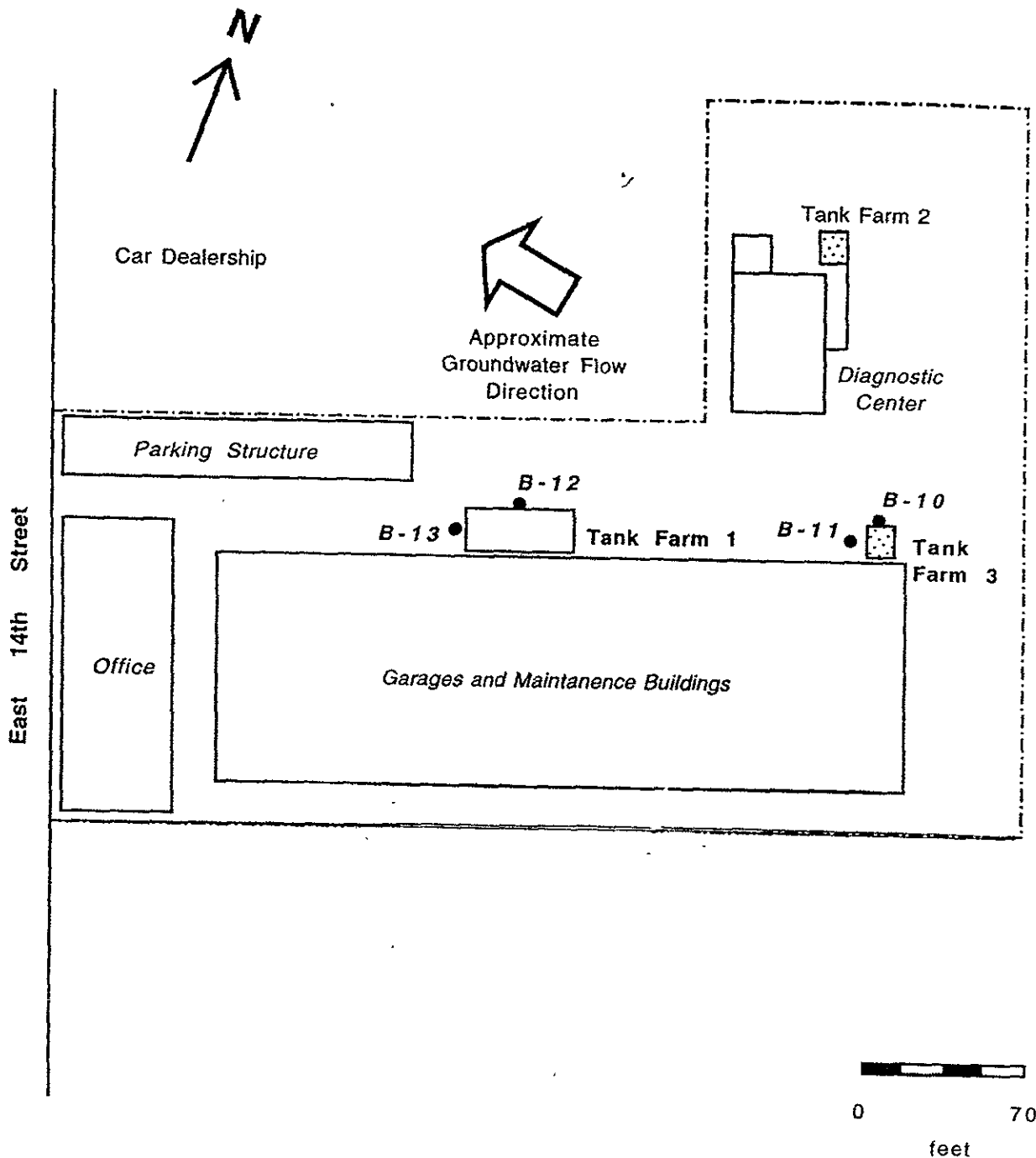
x = SAMPLE SITE

TABLE 15

SUMMARY OF ANALYTICAL RESULTS

DETECTABLE CONSTITUENTS
 SOIL SAMPLES - AC TRANSIT, CENTRAL MAINTENANCE FACILITY
 10626 EAST 14TH STREET, OAKLAND, CALIFORNIA

| DATE | SAMPLE IDENTIFICATION | SAMPLE DEPTH | METALS | | | | | | |
|----------|-----------------------|--------------|-------------------|---------------------------|--------------------|---------------------|-----------------|-------------------|-----------------|
| | | | DIESEL (mg/kg) | OIL AND GREASE (mg/kg) | CADMIUM (mg/kg) | CHROMIUM (mg/kg) | LEAD (mg/kg) | NICKEL (mg/kg) | ZINC (mg/kg) |
| 01/02/98 | EAST @ 13' DEPTH | 13' | 9 | 30 | 0.5 | 37 | 6 | 49 | 42 |
| 01/02/98 | WEST @ 15' DEPTH | 15' | 2 | N.D. <10 | 0.5 | 48 | 7 | 33 | 50 |



B-13
 ● Borehole Location and Number

PolyMatrix Associates
Castro Valley, CA

| | |
|--|------------------|
| Site Map with Proposed Boring Locations | |
| AC Transit | Proj. No. 982345 |
| Central Maintenance Facility | Scale: 1" = 70' |
| 10626 East 14th Street | Date: Nov., 1998 |
| Oakland, CA | Figure 05 |

Table 6
Tank Farm No. 1
Reconnaissance Study Performed August 25, 1998
Analytical Results for Soil and Ground Water

| Identification Number | Depth Sampled | Matrix | Method | Detection Limit, Soil (mg/kg), Water (mg/l) | Results, Soil (mg/kg), Water (mg/l) |
|-----------------------|---------------|--------------|---|---|-------------------------------------|
| B-13 | 23 feet | Ground Water | TPH-D (EPA 3510 & EPA 8015 modified) | 40 | N.D. ^a |
| B-13 | 23 feet | Ground Water | O&G-T (SM 5520B & 5520C) | 1 | 2 |
| B-13 | 23 feet | Ground Water | VOCs (EPA method 5030A & EPA method 8260A) ^b <i>N-Propylbenzene</i> | 0.005 | 0.086 |
| B-12-1 | 18-19 feet | Soil | TPH-D (EPA 3550 & EPA 8015 modified) | 2 | N.D. |
| B-12-1 | 18-19 feet | Soil | O&G-T (SM 5520E & 5520C) | 30 | 40 |
| B-12-1 | 18-19 feet | Soil | VOCs (EPA method 5030A & EPA method 8260A) ^b <i>2-Butanone</i> <i>Toluene</i> | 0.02 0.005 | 0.14 0.014 |
| B-13-1 | 18-19 feet | Soil | TPH-D (EPA 3550 & EPA 8015 modified) | 2 | N.D. |
| B-13-1 | 18-19 feet | Soil | O&G-T (SM 5520E & 5520C) | 30 | N.D. |
| B-13-1 | 18-19 feet | Soil | VOCs (EPA method 5030A & EPA method 8260A) ^b <i>2-Butanone</i> <i>Methylene Chloride</i> | 0.02 0.005 | 0.07 0.005 |

a = N.D. means non-detectable at performing laboratory's method detection limit.
b = Detectable compounds only.

Ref. No. 2350

cont Table **b**
 Tank Farm No. 3
 Reconnaissance Study Performed August 25, 1998
 Analytical Results for Soil and Ground Water

| Identification Number | Depth Sampled | Matrix | Method | Detection Limit, Soil (mg/kg), Water (mg/l) | Results, Soil (mg/kg), Water (mg/l) |
|-----------------------|---------------|--------------|---|---|--------------------------------------|
| B-10 | 22 feet | Ground Water | TPH-D (EPA 3510 & EPA 8015 modified) | 40 | N.D. ^a |
| B-10 | 22 feet | Ground Water | O&G-T (SM 5520B & 5520C) | 1 | 2 |
| B-10 | 22 feet | Ground Water | VOCs (EPA method 5030A & EPA method 8260A) ^b No Detectable Compounds | Various | N.D. |
| B-10 | 22 feet | Ground Water | LUFT Metals (EPA 200.7) Cadmium (Cd) Chromium (Cr) Lead (Pb) Nickel (Ni) Zinc (Zn) | 0.005 0.01 0.05 0.02 0.05 | N.D. 0.11 N.D. 0.11 0.11 |
| B-10 | 22 feet | Ground Water | TPH-G (EPA 5030 & EPA 8015 modified) | 0.050 | N.D. |
| B-10 | 22 feet | Ground Water | SVOCs (EPA method 3510 & EPA method 8270B) ^b No Detectable Compounds | Various | N.D. |

a = N.D. means non-detectable at performing laboratory's method detection limit.
 b = Detectable compounds only.

Ref. No. 2350

Table 6 (contd.)
Tank Farm No. 3
Reconnaissance Study Performed August 25, 1998
Analytical Results for Soil and Ground Water

| | | | | | |
|--------|-----------------|------|---|-------------------------|-----------------------------|
| B-10-3 | 10.5-11.25 feet | Soil | TPH-D (EPA 3550 & EPA 8015 modified) | 3 | N.D. ^a |
| B-10-3 | 10.5-11.25 feet | Soil | O&G-T (SM 5520E & 5520C) | 30 | N.D. |
| B-10-3 | 10.5-11.25 feet | Soil | VOCs (EPA method 5030A & EPA method 8260A) ^b Chloroform Methylene Chloride | 0.005 0.005 | 0.10 0.005 |
| B-10-3 | 10.5-11.25 feet | Soil | LUFT Metals (EPA 200.7) Cadmium (Cd) Chromium (Cr) Lead (Pb) Nickel (Ni) Zinc (Zn) | 0.4 1 1 1 1 | N.D. 43 3 47 53 |
| B-10-3 | 10.5-11.25 feet | Soil | TPH-G (EPA 5030 & EPA 8015 modified) | 0.3 | N.D. |
| B-10-3 | 10.5-11.25 feet | Soil | SVOCs (EPA method 3550 & EPA method 8270B) ^b No Detectable Compounds | Various | N.D. |

a = N.D. means non-detectable at performing laboratory's method detection limit.

b = Detectable compounds only.

Table 6 (contd.)
Tank Farm No. 3
Reconnaissance Study Performed August 25, 1998
Analytical Results for Soil and Ground Water

| | | | | | |
|--------|------------------|------|---|---------|-------------------|
| B-10-5 | 18.75-19.25 feet | Soil | TPH-D (EPA 3550 & EPA 8015 modified) | 1 | N.D. ^a |
| B-10-5 | 18.75-19.25 feet | Soil | O&G-T (SM 5520E & 5520C) | 30 | N.D. |
| B-10-5 | 18.75-19.25 feet | Soil | VOCs (EPA method 5030A & EPA method 8260A) ^b | | |
| | | | Chloroform | 0.005 | 0.011 |
| | | | Methylene Chloride | 0.005 | 0.006 |
| B-10-5 | 18.75-19.25 feet | Soil | LUFT Metals (EPA 200.7) | | |
| | | | Cadmium (Cd) | 0.4 | N.D. |
| | | | Chromium (Cr) | 1 | 34 |
| | | | Lead (Pb) | 1 | 4 |
| | | | Nickel (Ni) | 1 | 47 |
| | | | Zinc (Zn) | 1 | 52 |
| B-10-5 | 18.75-19.25 feet | Soil | TPH-G (EPA 5030 & EPA 8015 modified) | 0.3 | N.D. |
| B-10-5 | 18.75-19.25 feet | Soil | SVOCs (EPA method 3550 & EPA method 8270B) ^b | Various | N.D. |
| | | | No Detectable Compounds | | |

a = N.D. means non-detectable at performing laboratory's method detection limit.

b = Detectable compounds only.

Ref. No. 2350

Table 6 (contd.)
Tank Farm No. 3
Reconnaissance Study Performed August 25, 1998
Analytical Results for Soil and Ground Water

| | | | | | |
|--------|------------|------|--|-------|-------------------|
| B-11-1 | 11-12 feet | Soil | TPH-D (EPA 3550 & EPA 8015 modified) | 9 | N.D. ^a |
| B-11-1 | 11-12 feet | Soil | O&G-T (SM 5520E & 5520C) | 30 | N.D. |
| B-11-1 | 11-12 feet | Soil | VOCs (EPA method 5030A & EPA method 8260A) ^b | | |
| | | | 2-Butanone | 0.02 | 0.11 |
| | | | MTBE | 0.005 | 0.013 |
| | | | Toluene | 0.005 | 0.008 |
| | | | 1,2,3 Trichlorobenzene | 0.005 | 0.006 |
| | | | 1,2,4 Trichlorobenzene | 0.005 | 0.007 |
| B-11-1 | 11-12 feet | Soil | LUFT Metals (EPA 200.7) | | N/A ^c |
| B-11-1 | 11-12 feet | Soil | TPH-G (EPA 5030 & EPA 8015 modified) | | N/A |
| B-11-1 | 11-12 feet | Soil | SVOC's (EPA method 3550 & EPA method 8270B) ^b | | N/A |

a = N.D. means non-detectable at performing laboratory's method detection limit.

b = Detectable compounds only.

c = N/A means not analyzed.

Ref. No. 2350

Table 6 (contd.)
Tank Farm No. 3
Reconnaissance Study Performed August 25, 1998
Analytical Results for Soil and Ground Water

| | | | | | |
|--------|------------|------|--|---------|-------------------|
| B-11-2 | 18-19 feet | Soil | TPH-D (EPA 3550 & EPA 8015 modified) | 2 | N.D. ^a |
| B-11-2 | 18-19 feet | Soil | O&G-T (SM 5520E & 5520C) | 30 | N.D. |
| B-11-2 | 18-19 feet | Soil | VOCs (EPA method 5030A & EPA method 8260A) ^b No Detectable Compounds | Various | N.D. |
| B-11-2 | 18-19 feet | Soil | LUFT Metals (EPA 200.7) | | N/A ^c |
| B-11-2 | 18-19 feet | Soil | TPH-G (EPA 5030 & EPA 8015 modified) | 0.3 | N.D. |
| B-11-2 | 18-19 feet | Soil | SVOCs (EPA method 3550 & EPA method 8270B) ^b | | N/A |

a = N.D. means non-detectable at performing laboratory's method detection limit.

b = Detectable compounds only.

c = N/A means not analyzed.

Ref. No. 2350

Polymatrix Associates, Hayward, CA

Exploratory Boring Log

Project No. 97106 Boring/Well No. B-1
 Client: AC Transit Date Drilled: Sept. 12, 1997
 Location: 10626 E. 14th Street, Oakland, CA Logger: CMP
 Drilling Method: 3" OD GeoProbe® push
 Permit: Ala. Cnty. 97WR102
 Water Levels: 1st Enc: dry on completion
 Static: 20.8 feet @ 11:45 am

Well Installed: None
 Total Depth: 24'
 Cement Grout Seal: 24' to surface

| Sample No. | 4' con OV push | Depth (ft) | Lithology Log | Borehole Completion |
|------------|----------------|------------|---|---------------------|
| | | | Concrete and Subgrade | |
| | | | Artificial Fill, Class II | |
| B1-1 | | 5 | CL - Silty CLAY, dark yellowish brown, 10YR5/3, low plasticity, firm to stiff, damp. | |
| B1-2 | | 10 | Same as above, color change to very dark gray 10YR3/1, firm to stiff, damp. | |
| B1-3 | | 15 | Same as above, increase in very fine sand 20%, stiff, damp. | |
| B1-4 | | 20 | CL - Silty CLAY, very dark grayish brown 10YR3/2, moderate plasticity, sand interbeds at 15 feet, firm-stiff, damp. | |
| B1-5 | | 25 | Same as above, clayey sand interbed at 17 feet, damp. | |
| B1-6 | | 20 | CL - Silty CLAY, dark yellowish brown, 10YR4/4, low plasticity, v. f. sand 10%, iron mottles, firm, moist. | |
| | | 25 | Same, rootholes/burrows, firm, moist. | |
| | | 25 | Bottom of Boring = 24 feet water enters borehole very slowly | |

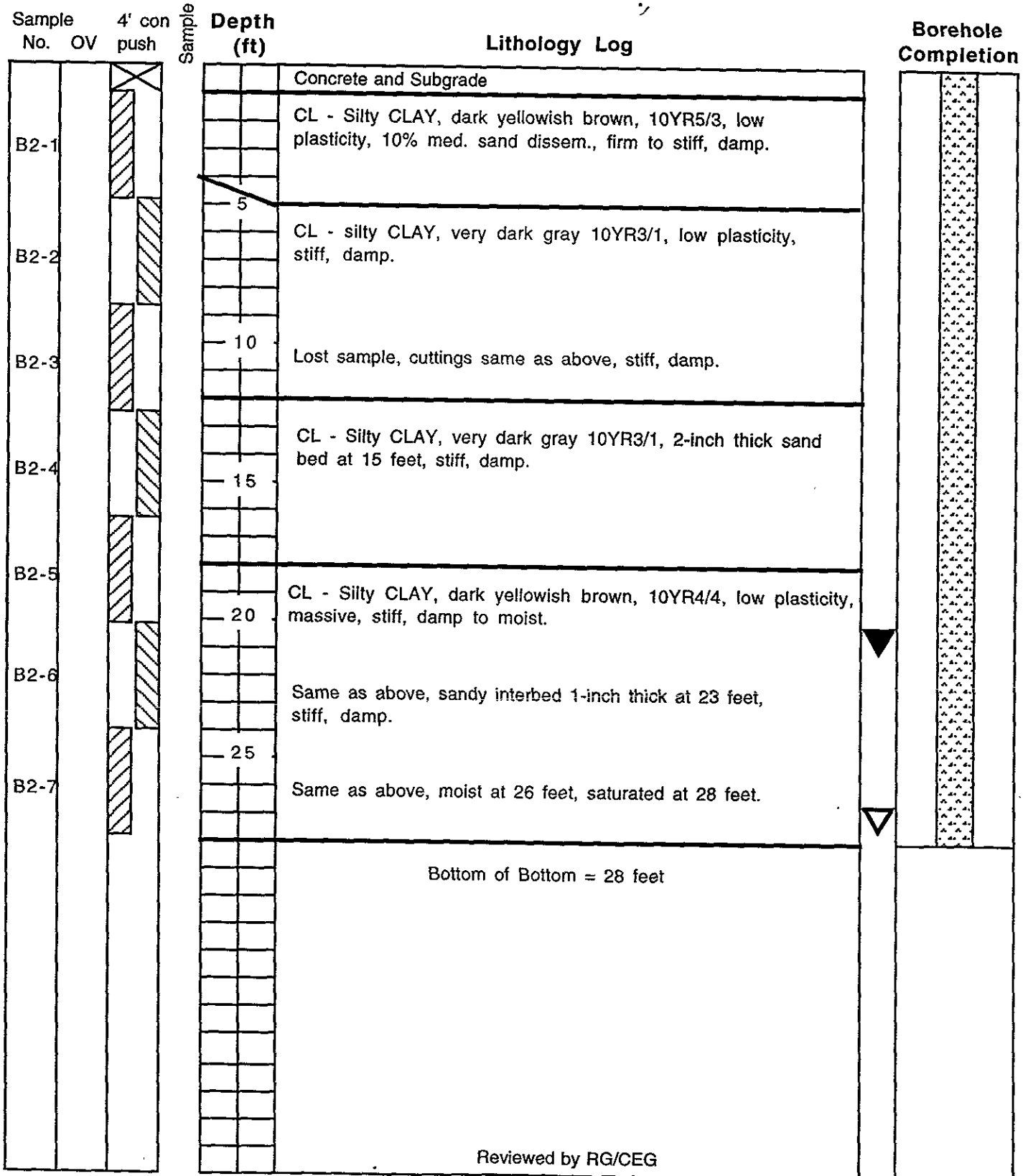
Reviewed by RG/CEG

Polymatrix Associates, Hayward, CA

Exploratory Boring Log

Project No. 97106 Boring/Well No. B-2
 Client: AC Transit Date Drilled: Sept. 12, 1997
 Location: 10626 E. 14th Street, Oakland, CA Logger: CMP
 Drilling Method: 3" OD GeoProbe® push
 Permit: Ala. Cnty. 97WR102
 Water Levels: 1st Enc: 27.5' Static: 20.45 @ 1:29 pm

Well Installed: None
 Total Depth: 28'
 Cement Grout Seal: 28' to surface



Reviewed by RG/CEG

Polymatrix Associates, Hayward, CA

Exploratory Boring Log

Project No. 97106 Boring/Well No. B-3

Client: AC Transit Date Drilled: Sept. 12, 1997

Location: 10626 E. 14th Street, Oakland, CA Logger: CMP

Drilling Method: 3" OD GeoProbe® push

Permit: Ala. Cnty. 97WR102

Water Levels: 1st Enc: 27'? Static: 20.95' @ 1:30 pm

Well Installed: None

Total Depth: 28'

Cement Grout Seal: 28' to surface

| Sample No. | 4' con OV push | Sample | Depth (ft) | Lithology Log | Borehole Completion |
|------------|-------------------|--------|---------------|---|------------------------|
| | | | | Concrete and Subgrade | |
| B3-1 | | | | CL - Silty CLAY, FILL to 3 feet, low plasticity, stiff, damp. | |
| | | | 5 | SC - Clayey SAND, varigated, clay 30% dissem. and low plasticity, sand fine 85%, massive, dense, damp. | |
| B3-2 | | | | | |
| | | | 10 | CL - Silty CLAY, very dark gray 10YR3/1, low plasticity, contains sandy interbeds @ 10 feet 2-4 inches thick, locally coarse sand, stiff overall, damp. | |
| B3-3 | | | | | |
| | | | 15 | Same as above, color change to dark yellowish brown 10YR4/4, stiff, , damp. | |
| B3-4 | | | | | |
| | | | 20 | CL - Silty CLAY, dark yellowish brown, 10YR4/4, low plasticity, massive, iron mottles, firm, moist. | |
| B3-5 | | | | | |
| | | | 25 | Same as above, sandy beds at 21 feet 6-inches thick are dry, stiff, damp. | |
| B3-6 | | | | | |
| | | | | SC - Clayey SAND 10YR4/4, dark yellowish brown, low plasticity, massive, med. dense, moist to saturated. | |
| B3-7 | | | | | |
| | | | | Bottom of Bottom = 28 feet | |

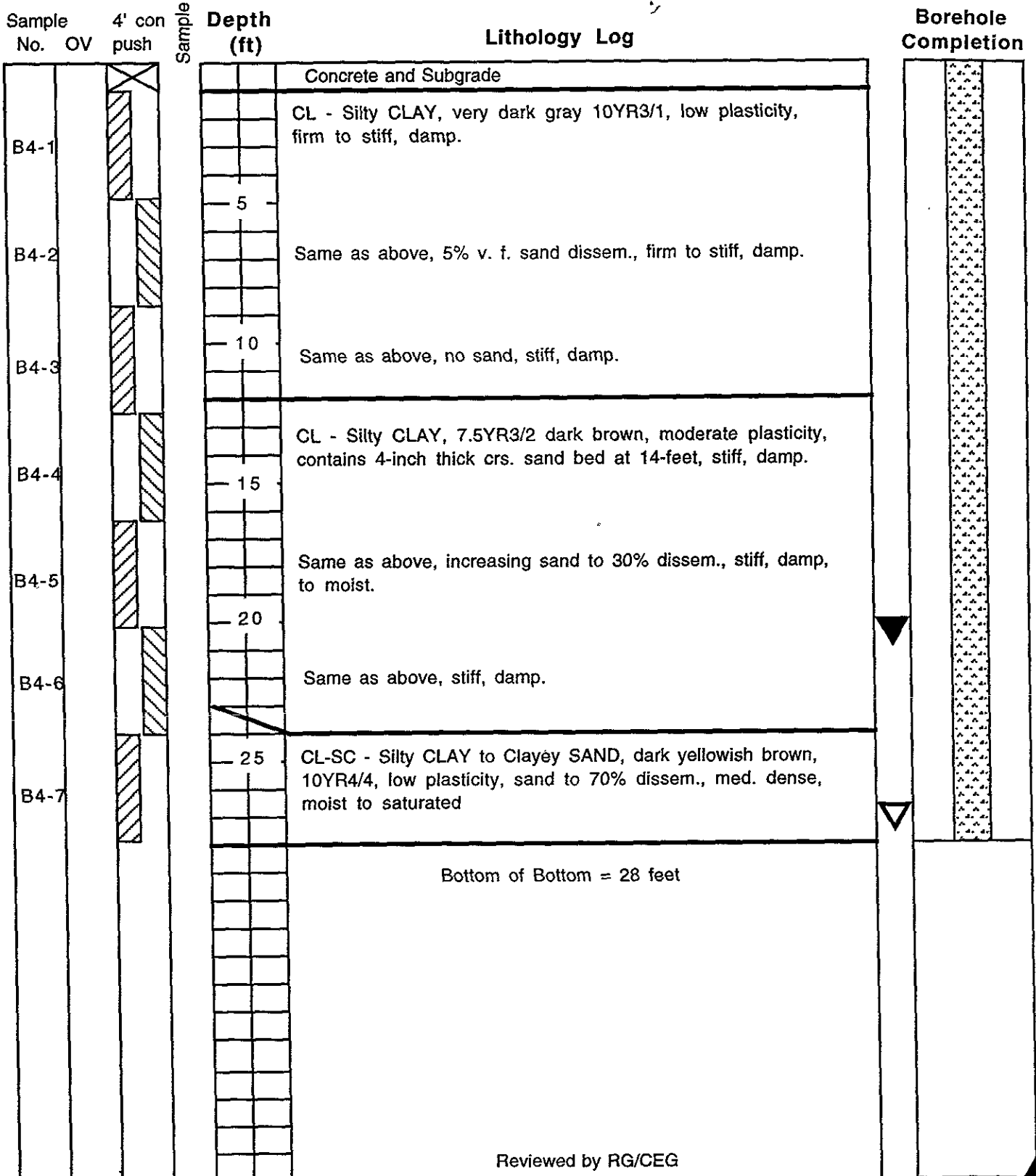
Reviewed by RG/CEG

Polymatrix Associates, Hayward, CA

Exploratory Boring Log

Project No. 97106 Boring/Well No. B-4
 Client: AC Transit Date Drilled: Sept. 12, 1997
 Location: 10626 E. 14th Street, Oakland, CA Logger: CMP
 Drilling Method: 3" OD GeoProbe® push
 Permit: Ala. Cnty. 97WR102
 Water Levels: 1st Enc: 28'± Static: 20.95 @ 3:39 pm

Well Installed: None
 Total Depth: 28'
 Cement Grout Seal: 28' to surface



Project No. 982345 Boring/Well No. B-10
 Client: AC Transit Date Drilled: August 25, 1998
 Location: 10626 E. 14th St. Oakland, CA Logger: CMP
 Drilling Method: 3" OD Geoprobe
 Permit: Alameda Cnty. 98WR350
 Water Levels: 1st Enc:17.95@09:16 Static: NM

Well Installed: No
 Total Depth: 24'
 Cement Grout Seal: 24' to surface

| Sample No. | Cont. OV | Push | Sample | Depth (ft) | Lithology Log | Borehole Completion |
|------------|----------|------|--------|------------|---|---------------------|
| | | | | | Concrete Pavement | |
| B-10-1 | - | | | | Class II Sandy SILT artificial fill, firm, damp | |
| | | | | 5 | CL - Silty CLAY, very dark grayish brown 10YR3/2, mod. plasticity, v. f. sand 5%, massive, stiff, damp. | |
| B-10-2 | - | | | | Pushes firm to hard. | |
| | | | | 10 | CL - Silty CLAY, dark grayish brown 10YR4/2, highly plastic, v. f. sand <5%, stiff-very stiff, damp. | |
| B-10-3 | - | | | | Same as above, pushes stiff, damp. | |
| | | | | 15 | | |
| B-10-4 | - | | | | Driller calls change to firm easy push. | |
| | | | | 20 | CL - Silty CLAY, brown 10YR5/3, mod. plasticity, v. f. sand 5-10%, massive, black mottles, rootholes, firm, damp to moist overall, rootholes wet. | |
| B-10-5 | - | | | | | |
| | | | | 25 | Bottom of Boring = 24 feet | |
| B-10-6 | - | | | | | |

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Project No. 982345 Boring/Well No. B-11
 Client: AC Transit Date Drilled: August 25, 1998
 Location: 10626 E. 14th St. Oakland, CA Logger: CMP
 Drilling Method: 3" OD Geoprobe
 Permit: Alameda Cnty. 98WR350
 Water Levels: 1st Enc: None Static: --

Well Installed: No
 Total Depth: 24'
 Cement Grout Seal: 24' to surface

| Sample No. | Cont. OV | Push | Sample Depth (ft) | Lithology Log | Borehole Completion |
|------------|----------|------|-------------------|--|---------------------|
| | | | | Concrete Pavement | |
| | | | | CL - Silty CLAY, very dark grayish brown 10YR3/2, mod.-high plasticity, v. f. sand 5%, massive, stiff, damp. | |
| | | grab | 5 | Same as above, stiff, damp | |
| | | | 10 | CL - Silty CLAY, brown 10YR4/3, mod. plasticity, v. f. sand 5%, stiff, damp. | |
| B-11-1 | | grab | 15 | Same as above, stiff, damp | |
| | | | 16-17.5 | Driller calls change 16-17.5. | |
| B-11-2 | | | 20 | CL - Silty CLAY, brown 10YR5/3, mod. plasticity, v. f. sand to 15%, massive, stiff, damp to moist. | |
| | | | | Bottom of Boring = 20 feet | |

Reviewed by RG/CEG

Project No. 982345 Boring/Well No. B-12

Client: AC Transit Date Drilled: August 25, 1998

Location: 10626 E. 14th St. Oakland, CA Logger: CMP

Drilling Method: 3" OD Geoprobe

Permit: Alameda Cnty. 98WR350

Water Levels: 1st Enc: moist 10:00am Static: 23' @ 10:15am

Well Installed: No

Total Depth: 24'

Cement Grout Seal: 24' to surface

| Sample No. | Cont. OV | Push | Sample | Depth (ft) | Lithology Log | Borehole Completion |
|------------|----------|------|--------|------------|--|---------------------|
| | | | | | Concrete Pavement | |
| B-12-a | - | | | | CL - Silty CLAY, very dark gray 10YR3/1, low-mod. plasticity, firm, damp. | |
| | | | | 5 | | |
| B-12-b | - | | | | Same as above, firm, damp. | |
| | | | | 10 | | |
| B-12-c | - | | | | CL - Silty CLAY, dark yellowish brown 10YR4/4, low-mod. plasticity, stiff, damp. | |
| | | | | 15 | | |
| B-12-d | - | | | | Same as above, stiff, damp. | |
| | | | | 20 | | |
| B-12-e | - | | | | CL - Silty CLAY, brown 10YR4/3, mod. plasticity, v. f. sand 15%, massive, firm-stiff, damp; lost sample 18-20. | |
| | | | | 25 | | |
| | | | | | Bottom of Boring = 24 feet, water entering borehole very slowly. | |

Reviewed by RG/CEG

Project No. 982345 Boring/Well No. B-13
 Client: AC Transit Date Drilled: August 25, 1998
 Location: 10626 E. 14th St. Oakland, CA Logger: CMP
 Drilling Method: 3" OD Geoprobe
 Permit: Alameda Cnty. 98WR350
 Water Levels: 1st Enc: 18.90 @11:45am Static: NM

Well Installed: No
 Total Depth: 24'
 Cement Grout Seal: 24' to surface

| Sample No. | Cont. OV | Push | Sample | Depth (ft) | Lithology Log | Borehole Completion |
|------------|----------|------|--------|------------|--|---------------------|
| | | | | | Concrete Pavement | |
| B-13-1 | - | | | | ML - Silty GRAVEL, and mixed Class II artificial fill, firm, hard. | |
| | | | | 5 | | |
| B-13-2 | - | | | | CL - Silty CLAY, brown 10YR4/3, mod. plasticity, v. f. sand 10%, massive, stiff, damp. | |
| | | | | 10 | Driller calls stiff at 10 feet. | |
| B-13-3 | - | | | | CL - Silty CLAY, 10YR4/3 brown, mod. plasticity, v. f. sand 10%, caliche, very stiff, damp. | |
| | | | | 15 | | |
| B-13-4 | - | | | | Same as above, 2-inch thick crs sand interbed at 16 feet, very stiff, damp. | |
| B-13-5 | - | | | | | |
| | | | | 20 | | |
| B-13-6 | - | | | | Same as above, becomes easy at 21 feet, very thin sand interbeds in clay stiff, very moist to saturated. | |
| | | | | 25 | | |
| | | | | | Bottom of Boring = 24 feet, water enters borehole slowly | |

Reviewed by RG/CEG