WORK PLAN
FOR
SITE INVESTIGATION AND REMEDIATION
1461 PARK AVENUE
EMERYVILLE, CALIFORNIA

Prepared for:

Union Bank, Trust Department
Trustees under the Will of
Albert J. Watson, deceased
P.O. Box 3100
Los Angeles, California 90051

Prepared by:

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Project #050-03
March 1991

RAC

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1.0 INTRODUCTION

1.1 SITE USE HISTORY

The property at 1461 Park Avenue in Emeryville, California (Figure 1) was occupied from 1968 to 1973 by Pic-a-Tune, reportedly a music or record distributor. From 1973 to 1986 it was leased by Stewart Western, Incorporated, Stewart Radiator and Stewart Auto Parts. The "Stewart" companies were involved in rebuilding brake shoes and/or warehousing and distribution of auto parts. In 1986 Stewart Western was purchased by Modine Southwest Company. Apparently this company owns Western Brake Company, which is located on the site and warehouses and distributes vehicle brake parts.

1.2 UNDERGROUND STORAGE TANK REMOVAL

In March 1990, two underground storage tanks (USTs) were removed by Property Contamination Control Incorporated (PCC). A tank closure report was filed with the Alameda County Health Care Agency (ACHCA) in July 1990. A 3000-gallon tank containing gasoline was found in good condition. A 500-gallon tank thought to contain diesel showed evidence of leakage, due to failure at the welds. The required reports of contamination were filed with the Regional Water Quality Control Board and with the ACHCA.

During the excavation of the tanks, three soil samples and two water samples were obtained from the tank excavation, as ground water occurs at a depth of about 6½ feet. Soil samples were taken at a depth of four feet from the north and south walls of the gasoline tank excavation and one soil sample was obtained of water standing in the hole. A soil sample was taken at a depth of five feet from the south wall of the diesel tank excavation and one water sample was taken from the ground water in the excavation. After removal of the USTs, the contaminated soil was returned to the excavation.

Analysis for total petroleum hydrocarbons (TPH) by EPA Method 5030/CADOHS detected 62.3 mg/kg and 460 mg/kg TPH in the north and south walls of the gasoline tank excavation, respectively and 1580 mg/kg TPH was detected in the south wall of the diesel tank excavation. Analysis for TPH as diesel by EPA Method 3550/CADOHS was also performed, but none was detected. Benzene, toluene, xylenes and ethylbenzene (BTXE) were detected in the three samples. In the north wall of the gasoline tank excavation, BTXE was detected

at concentrations of 9.8, 207, 947 and 32.9 μg/kg, respectively. In the south wall of the gasoline tank excavation, BTXE was found at concentrations of 1,600, 9,140, 32,300 and 5,080 μg/kg, respectively. In the south wall of the diesel tank excavation, BTXE was detected at concentrations of 17.3, 2,600, 100,400 and 481 μg/kg, respectively.

Laboratory testing for TPH as gasoline detected 38.1 mg/liter in the water from the gasoline tank excavation. BTXE concentrations were 2,750, 2,840, 5,890 and 1,160 μg/liter, respectively. In the water from the diesel tank excavation, TPH as gasoline was detected at a concentration of 110 mg/liter and BTXE at concentrations of 5,240, 7,040, 15,000 and 2,420 μg/liter, respectively.

The results of chemical analysis suggest that the 500-gallon "diesel" tank may have contained gasoline during the period of leakage. The tank may have been used for diesel and gasoline storage, but appears to have leaked gasoline.

Elevated concentrations of TPH and BTXE occur in the north and south walls of the gasoline tank excavation and in the south wall of the diesel tank excavation (the soil was not tested from the north wall of the diesel tank excavation). It is probable that all walls of the tank excavations had elevated concentrations of petroleum hydrocarbons. As the ground water occurs at a depth of 6½ feet, it is likely that ground water has elevated levels of petroleum hydrocarbons. The concentrations of the hydrocarbons in the ground water, however, would be much lower than those obtained from the ground water within the open excavation. This is because soil with relatively high concentrations of petroleum hydrocarbons could have been mixed with the ground water during the excavation.

1.3 GROUND WATER MONITORING WELL CONSTRUCTION AND SAMPLING

In September 1990, three borings were drilled to a depth of 20 feet on the site (Figure 2). Soil samples were obtained at depths of 5 and 10 feet and analyzed for TPH as gasoline by EPA Method 5030/CADOHS and for BTXE by EPA Method 8020. The concentrations of TPH ranged from less than 2.5 to 150 mg/kg. Concentrations of benzene were from less than 5 to 5,000 μg/kg, toluene from less than 5 to 2,200 μg/kg, ethylbenzene from less than 5 to 3,100 μg/kg and xylenes from less than 5 to 4,900 μg/kg. Upon completion of drilling and soil sampling, monitoring wells were installed in the boreholes.

Two weeks after installation, the wells were purged and sampled by Alpha Chemical and Biomedical Laboratories. The samples were analyzed for TPH as gasoline by EPA Method 5030/CADOHS and for BTXE by EPA Method 8020. TPH and BTXE were detected in one well only. The concentration of TPH was 1.2 mg/liter. BTXE concentrations were 209, 33.7, 128 and 5.4 μg/liter, respectively.

As the site plans and well locations from the PCC report and the Alpha report conflict, the accurate well locations and their relationship to the tank excavation/building are to be relocated during the next field visit.

1.4 REGIONAL GROUND WATER CONTAMINATION

During the tank removal and subsequent water well sampling, the ground water was observed to be green in color. It is our understanding that the source of the green-colored ground water is leakage from a nearby property leased to Electro-Coatings, Incorporated. The leak(s) from the plating operations at that site have contaminated the ground water with metals at concentrations requiring remediation. Electro-Coatings, Incorporated has recently entered into an agreement with Sumitec, Incorporated, the property owner, for a claim of $2,540,000 for site assessment and remediation. The agreement is to be filed (or may have been filed) with a bankruptcy court. It is our understanding that there are regulatory requirements for the remediation of the contamination of the ground water at the site (1461 Park Avenue) which has been caused by leakage from Electro-Coatings Incorporated.

2.0 OBJECTIVES OF WORK

The objectives of the proposed work are to define the lateral extent of the petroleum hydrocarbon migration in the soil, assess petroleum hydrocarbons in the ground water and remediate the soil contamination.

3.0 SCOPE OF WORK

The scope of work includes two phases, site characterization and remediation. The first phase consists of an investigation to assess the extent and volume of the contaminated soil, including field work, laboratory analysis, data analysis, assessment of appropriate and available options for soil disposal, and report preparation. The second phase includes excavation of the contaminated soil, soil disposal and report preparation.

3.1 SITE CHARACTERIZATION

3.1.1 Field Work

The previous investigation detected petroleum hydrocarbons in soils in the walls of the tank excavations, approximately an area of 10 feet x 30 feet. The contamination extended vertically to ground water, which is at a depth of about 6½ feet. Additional investigation includes hand-augering six borings to the water level around the perimeter of the previous tank excavation. Soil samples would be obtained in the borings at depths of 2, 4 and 6 feet. In addition, three borings will be drilled within the backfilled tank excavations, for characterization of the soil for disposal (see Section 3.2.1). These borings are needed because little area is available onsite for stockpiling of soil for sufficient time to have samples analyzed and for approval of soil disposal at Ogden Environmental, Gibson Oil or a local landfill. A description of the hand-augering and sampling procedures is in Appendix A.

A one-inch high sample of soil from each sample will be screened in the field using a head space sampling procedure to obtain approximate concentrations of volatile hydrocarbons. A description of the head space screening is presented in Appendix A.

The three existing ground water wells will be purged, sampled and analyzed for petroleum hydrocarbons in the ground water and to begin to satisfy the quarterly monitoring requirements of the agencies. Well purging and sampling procedures are presented in Appendix A. The wells will be surveyed using an existing bench mark, if requested by the ACHCA. The datum for elevations would be mean sea level.

The health and safety plan describing the health and safety measures to be utilized in the field is presented in Appendix B.

3.1.2 Laboratory Analysis

Laboratory analysis will generally follow the guidelines for Recommended Minimum Verification Analyses for Underground Tank Leaks, as specified by the ACHCA. Soil samples will be screened in the field using the head space device. Based on the results of the field screening, two samples from each boring will be analyzed for TPH and BTXE by EPA Method 8260 and for total lead. The ground water samples will be analyzed for TPH

as gasoline by EPA 5030/CADOHS and for BTXE by EPA Method 602, for pH by EPA 150.1. As spills and leaks at Electro-Coatings, Incorporated are suspected of contaminating ground water beneath the site at 1461 Park Avenue, the ground water will be analyzed for total lead, copper, nickel and chrome (necessity for analysis for additional metals will be determined by discussion with Dennis Byrne of the ACHCA).

3.1.3 Data Review/Report

After completion of the field program, the field data will be analyzed and plans and cross-sections will be prepared to display the extent of chemical migration. A report (closure plan) will be prepared that includes a description of the field work, the boring logs, a discussion of the laboratory program and the results, and a discussion of the lateral extent of chemical migration at the site. Plans, sections and sketches of the proposed remediation would be provided as appropriate. The report will be submitted to the ACHCA.

3.2 REMEDIATION

3.2.1 Laboratory Analysis

As space at the site is extremely limited, there is no room for storage of soil stockpiles that would be generated from the excavation. Therefore, the contaminated soil will be sampled directly by hand-augering (as discussed in Section 3.1.1) into the area of the former tank excavation, instead of being sampled from soil stockpiles. The samples will be composited and analyzed to meet the requirements for treatment by soil fixation at Gibson Oil in Bakersfield, by thermal oxidation at Ogden Environmental, or for disposal at a local sanitary landfill. The analysis will consist of TPH by EPA Method 8015 modifed, volatile organic compounds (VOCs) by EPA Method 8240, aquatic toxicity, ignitability, cyanides and sulfides, pH and CAM metals (if necessary, the WET and TCLP extraction would be performed and the concentration of soluble metals analyzed for by the laboratory).

3.2.2 Excavation of Soil

Subsequent to approval by the ACHCA of the excavation plan in the final assessment report/remediation plan, and the acceptance of the soil by the treatment or disposal facility, excavation would commence. Initially, asphalt or concrete pavement on the excavation site would be cut and broken. The soil would then be excavated from within the former tank

excavation. Obviously contaminated soil would be separated from clean soil, if any. Samples would be obtained from the side walls of the excavation and would be analyzed in an onsite mobile laboratory for TPH and BTXE. The excavation would be terminated when the side wall samples show concentrations of TPH less than 10 mg/kg and benzene, toluene, xylenes and ethylbenzene are less than 10, 50, 50 and 50 μg/kg, respectively.

It is anticipated that the soil would be directly loaded onto trucks from the excavation and taken to the treatment or disposal facilty. The excavation would be backfilled with clean granular fill. The backfill materials would be compacted and the area would be resurfaced with asphalt or concrete to meet existing pavements.

3.2.3 Report

A final report will be prepared for submittal to ACHCA. The report will include a description of work performed, laboratory analyses and copies of manifests for soil disposal/treatment.

Respectfully submitted,
REMEDIAL ACTION CORPORATION

Edward B. Sirota
Project Manager

APPENDIX A
FIELD PROCEDURES

A.1 HAND AUGER PROCEDURES

1. The hand auger borings will be drilled with a 3-inch diameter hand-held auger by a representative of Remedial Action Corporation.

2. The auger bit will be cleaned prior to drilling each hole using a brush and tap water, TSP solution, a tap water rinse, and a deionized water rinse. The auger will be air-or paper towel dried before beginning each hole.

3. Soil descriptions, sample type and depth, and related information will be recorded on a boring log under the supervision of a State-Registered Geologist or Professional Engineer from Remedial Action Corporation.

6. Soil samples will be collected in 2-inch inside diameter and 1-and 4-inch long stainless steel tubes. Two 1-inch and 1 4-inch tubes are generally enclosed in the sampler. Prior to initial use, the sample tubes will be immersed in a three percent sulfuric acid solution and then cleaned, rinsed and dried using the procedures described in Item A.1.5.

7. The sampler will be driven into the soil approximately 8 inches using a slide hammer with an approximate weight of 5.5 pounds. The double acting hammer will be then pounded upwards to recover the sampler from the hole.

8. Following retrieval of the sampler the 4-inch tube will be removed from the sampler, the ends covered with aluminum foil, and capped with tight fitting PVC end caps. The sample will be labeled with the sample number, sample depth, project name, date, and project number before being placed in a ziploc bag.

9. The soil in one 1-inch ring and observation during hand augering will be used to describe the soil and one 1-inch ring will be used for field head space analysis.

10. The samples will be placed in ziploc bags stored in an ice chest cooled to a temperature of approximately 40 degrees Fahrenheit using ice.

11. All samples will be delivered to the laboratory within 48 hours of collection. Sample handling, transport, and delivery to the laboratory will be documented using Chain-of-Custody procedures, including the use of Chain-of-Custody forms.

A.2 HEAD SPACE ANALYSIS

1. A 2-inch diameter by 1-inch long sample ring will be cut from the sample and immediately extruded into a plastic bag or mason jar and the container sealed. Cohesionless samples, gravels, sands and silts are extruded directly into the mason jar. Cohesive samples are extruded into the plastic bag where they are crumbled under finger pressure, then the bag is emptied into the mason jar and sealed.

2. The lid on the mason jar contains a quick connect and septum for extracting hypodermic samples.

3. The sample will be placed into a hot water bath, if available, at a temperature of 50°C for about 1/2 hour. When a water bath is not available, the samples will be warmed by direct heat from a heater.

4. The sample will be removed from the water bath or heated area and connected through a quick connect fitting to a Foxboro FID OVA (flame ionization detector, organic vapor analyzer).

5. The maximum gauge reading is recorded as the concentration in PPM (volume to volume).

6. If the concentrations exceed the gauge reading of 1,000 ppm, a diluter is used to increase the OVA readings by a factor of 10 or 25. The inlet end of the diluter is attached by quick connect to a second mason jar containing ambient air. The above is necessary to maintain approximately equal pressures for the influent and inlet to the diluter.

A.3 WATER SAMPLE COLLECTION PROCEDURES

1. Prior to sampling the wells, the well would be purged by removing two to four casing volumes with a bailer.

2. The bailer will be washed in a TSP solution followed by a tap water and a deionized water rinse.

3. The water level and depth to the bottom of the well will be measured using a conductance probe and a fiber measuring tape. The probes, bailers, and tapes will be rinsed in a solution of TSP followed by deionized water prior to use.

4. Free product will be measured in the well with a clear acrylic bailer.

5. A stainless steel bailer will be used for sampling the wells. The bailer will be washed in TSP solution followed by a tap water and a deionized water rinse. Dedicated nylon fishing line will be used with the bailer.

6. Water samples will be collected from a valved spigot inserted in the bottom of the bailer which will discharge directly into 40 milliliter VOA vials. The spigot will be cleaned and rinsed as above before each use.

7. All samples will be placed in an ice chest and cooled to a temperature of approximately 40 degrees Fahrenheit following collection.

8. Samples will be delivered to the laboratory within 48 hours of collection. Sample handling, transport, and delivery to the laboratory will be documented using Chain-of-Custody procedures and appropriate forms.

HEALTH AND SAFETY PLAN
SITE INVESTIGATION AND REMEDIATION
1461 PARK AVENUE
EMERYVILLE, CALIFORNIA

PROJECT NO. 050-03

REMEDIAL ACTION CORPORATION

MARCH 1991

APPROVED

Project Safety Officer — Date: 3/18/91

Project Manager — Date: 3/18/91

RAC

1.0 INTRODUCTION

REMEDIAL ACTION CORPORATION (RAC) has been retained by Union Bank to perform a site investigation and remediation at Western Brake at 1461 Park Avenue, in Emeryville, California. This document presents the health and safety procedures that are intended to guide field activities at the site. The provisions of this plan apply to employees of RAC and its subcontractors. Employees of the owners, Security Pacific National Bank and its subcontractors, and Federal, State and Local agencies are expected to observe the safety rules and regulations established by their respective organizations in addition to the requirements of this document.

2.0 PROJECT SAFETY PERSONNEL

2.1 SAFETY PERSONNEL

REMEDIAL ACTION CORPORATION has been responsible for the preparation of this health and safety plan, and is to monitor compliance of its personnel, those of its subcontractors and visitors to the site, with its provisions. REMEDIAL ACTION CORPORATION personnel responsible for the distribution of this health and safety plan and for the compliance audit are the Project Safety Officer and the Project Manager.

The Project Safety Officer is responsible for delivering the plan and any addenda to the Project Manager and for advising the Project Manager and Site Safety Officer on health and safety provisions of this plan, suspend work or modify work practices for safety reasons, and to dismiss individuals whose conduct on site endangers the health and safety of others.

The Project Manager is responsible for distributing the plan to all RAC field personnel and to an authorized representative of each firm contracted to assist with on-site work. The Project Manager is also responsible for implementing the provisions of this plan and its addenda. Implementation includes review of field personnel compliance with RAC's medical examination requirements, training of field personnel involved with the project, provision for the appropriate safety equipment, and that the required health and safety documents are submitted to the Project Safety Officer. The authority of the Project Manager is the same as that of the Project Safety Officer.

The Site Safety Officer is responsible for assisting the Project Manager with on-site implementation of this site safety plan. His responsibilities include:

1. Maintaining safety equipment supplies.
2. Performing air quality measurements as required or needed.
3. Directing decontamination operations and emergency response operations.
4. Setting up work zone markers and signs if such zones are specified in the site safety plan.
5. Reporting all accidents, incidents, and infractions of safety rules and requirements to the Project Manager and the Project Safety Officer.

The Site Safety Officer has the authority to suspend work any time he determines that the provisions of the site safety plan are inadequate to provide a working environmenot conducive to worker safety and he is to inform the Project Manager of individuals whose on-site presence jeopardizes their health and safety or the health and safety of others.

3.0 WORK DESCRIPTION

- Drill nine soil borings using a hand auger.
- Purge and sample three groundwater monitoring wells.
- Collect soil samples from the borings and the wells for laboratory analysis.
- Excavate an area containing contaminated soil.

During drilling of the borings and ground water monitoring well inspection, the work zone will be monitored for volatile organic compounds (VOCs) using a Foxboro OVA 128 organic vapor analyzer. The OVA will be operated by the Site Safety Officer.

4.0 HAZARD ASSESSMENT

According to information found in the site characterization, the major chemical compounds of concern most likely to be encountered during the work appear to be gasoline. The following is a brief description of the potential hazards associated with this compound:

4.1 HAZARDOUS CHEMICAL COMPOUNDS

4.1.1 Gasoline

		RECOMMENDED EXPOSURE LIMIT		
MATERIAL	CAS #	TYPE	AMOUNT	AGENCY
Gasoline	8006619	PEL	300ppm	CAL-OSHA
		STEL	500ppm	CAL-OSHA

Notes: PEL = permissible exposure limit
STEL = short term exposure limit

Gasoline is a complex blend of petroleum hydrocarbons primarily composed of paraffins, napthenes, aromatics and olefins. It is a colorless to red liquid with a petroleum odor. It is a flammable liquid with a high volatility and its vapors are heavier than air.

Under conditions where exposure may occur, mild eye, nose, and throat irritation, headache, nausea, drowsiness and dizziness may possibly occur. In open areas, ventilation is usually

adequate to prevent prolonged breathing of high gasoline vapor concentrations. Gasoline containing benzene, toluene and xylene may be potentially carcinogenic in laboratory animals. A hazard assessment of these compounds follows the gasoline assessment.

Gasoline has a flash point of -45°C. The flammability limits are 1.4 - 7.6%. Extreme caution must be taken to prevent sources of ignition from coming into contact with gasoline vapors. A 25 foot no smoking zone must be maintained during work hours.

4.1.2 Aromatic Petroleum Distillates

		RECOMMENDED EXPOSURE LIMITS		
MATERIAL	CAS #	TYPE	AMOUNT	AGENCY
BENZENE	71432	PEL	1 ppm	CAL-OSHA
		STEL	5 ppm	CAL-OSHA
TOLUENE	108883	PEL	100 ppm	CAL-OSHA
		STEL	150 ppm	CAL-OSHA
XYLENE	1330207	PEL	100 ppm	CAL-OSHA
		STEL	150 ppm	CAL-OSHA
ETHYL-BENZENE	100414	PEL	100 ppm	CAL-OSHA
		STEL	125 ppm	CAL-OSHA

Notes: PEL = permissible exposure limit
STEL = short term exposure limit

These aromatic petroleum distillates are a significant portion of gasoline and are colorless liquids with strong petroleum hydrocarbon-like odors. They are all flammable, are moderately volatile, their vapors are heavier than air and they have low solubility in water.

Exposure to the aromatic petroleum distillates in excess of their recommended exposure limits can cause mild eye, nose and throat irritation and can produce a narcotic effect on the central nervous system. Symptoms of exposure at these concentrations include headache, nausea, drowsiness, dizziness and loss of coordination. Prolonged exposure at these concentrations can result in unconsciousness and coma. Although not toxic by skin absorption, these materials are absorbed through the skin and skin exposure may contribute to other routes of exposure. They all defat the skin. There is some evidence to indicate that repeated and prolonged exposure may result in a condition known as "solvent syndrome" characterized by reversible central nervous system damage. There is also some evidence to indicate that toluene may sensitize the heart, predisposing exposure victims to cardiac arrythmia. Gasoline containing benzene, toluene and xylene may be potentially carcinogenic in laboratory animals. Benzene is a known human carcinogen and has been shown to cause leukemia, blood disorders and chromosome damage in humans and adverse birth effects in laboratory animals.

4.2 INHALATION HAZARD

The vapor concentrations that might be encountered during drilling may exceed currently recommended exposure limits. Respiratory protection must be used if 80 percent of the exposure limits are exceeded.

4.3 DERMAL EXPOSURE HAZARD

Contact of sufficient duration to cause significant absorption of toxic components is highly unlikely. Repeated daily or prolonged contact with drilling spoils, however may be expected to defat the skin and perhaps over a long period of time lead to irritation and dermatitis. For this reason, direct skin contact with drilling spoils shall be avoided by wearing protective gloves. However, if skin contact does occur, the exposed areas shall be washed with soap and water and rinsed thoroughly.

4.4 EXPLOSION HAZARD

Elevated vapor concentrations may be present which could be sources for explosion. Caution must be taken to prevent sources of ignition such as cigarettes, open flames and non-explosion proof electrical motors from operating within the restricted zone (Section 5.3).

4.5 OTHER HAZARDS

Sufficient attention must be paid to other possible hazards on the site including but not limited to:

- improper use of hand tools,
- rotating machinery,
- dehydration or sun stroke of the personnel,
- tripping on objects or open ditches, and
- lack of oxygen through blockage of face masks.

5.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

5.1 MEDICAL CLEARANCE AND MONITORING

All project personnel who may be required to wear respirators must provide evidence that they have been cleared by a physician to wear respirators. All full-time employees of RAC are to be active participants in the RAC medical surveillance program.

5.2 SAFETY ORIENTATION MEETING

All field personnel (from RAC and the subcontractor) must attend a safety orientation meeting before commencing the field work. The meeting will be scheduled and conducted by the project manager or the site safety officer and must include respirator fit testing for all individuals who have not been test fitted and who may be required to wear respirators. The meeting will include presentation of the health and safety plan and also the NIOSH report regarding confined spaces will be presented at the initial safety meeting.

5.3 WORK ZONE

A restricted zone will be maintained to a distance of 25 feet from the work activity (drilling) area. Protective clothing and equipment, as described below in subsection 5.4 are to be worn by all personnel working within the restricted zone.

5.4 PROTECTIVE EQUIPMENT AND CLOTHING

5.4.1 Equipment Required for Field Personnel

- Hard hat
- Coveralls (disposable)
- Boots (water-proof with steel toes)
- Gloves (latex and/or nitrile)

5.4.2 Equipment Required to be Available on Site

- Two respirators (half-mask with organic vapor cartridges)
- First-aid kit with eye wash
- Fire extinguisher
- Construction tape and barriers to delineate work zone
- NO SMOKING signs
- A vehicle with keys in the ignition must be kept on site when personnel are working for the transport of slightly injured personnel to the hospital. Severely injured personnel MUST ONLY be transported by paramedics.

5.4.3 Respirator Usage

The Project Safety Officer and/or the Project Manager is responsible for deciding if respirator use should be routine or based on OVA measurements. Ten ppm should be used as the critical concentration. If concentrations of organic vapors in the ambient air (as measured by the OVA) exceed the background concentrations by 10 ppm, the field personnel must move out of the area. If the concentration remains at or above 10 ppm for more than 5 minutes, the Project Safety Officer and/or the Project Manager should be contacted and a decision made regarding whether to proceed with the work wearing respirators and extending the restricted work zone.

If the decision is made to work while wearing a respirator, the conditions in Subsection 5.2 are to be complied with. Cartridges for the respirators must be replaced daily or when break-through occurs, whichever occurs first.

5.4.4 Buddy System

All field personnel are to work with another person at the site. The subcontractor's representative can serve as the second person while the work is being conducted in the field. Under no circumstances, other than completion of paperwork at the end of the day, are field personnel to work alone at the site while conducting field activities.

6.0 ORGANIC VAPOR MONITORING

The organic vapor concentrations (as measured by the OVA) in the breathing zone of the individual working closest to the vapor source must be monitored. Respirators must be worn if the concentrations are equal to or greater than 10 ppm above background levels.

7.0 EMERGENCY RESPONSE PROCEDURES

7.1 PHYSICAL INJURY

In the event of an accident resulting in physical injury, apply first aid and call paramedics. Severely injured personnel are to be transported only by paramedics and/or by ambulance personnel. At the hospital, a physician's attention is mandatory regardless of how serious the injury appears.

The Project Safety Officer and the Project Manager are to be notified by the Site Safety Officer, as soon after the injury as practical, regarding the nature of the accident. A written report is also to be prepared and submitted by the Site Safety Officer.

7.2 FIRE, EXPLOSION, AND PROPERTY DAMAGE

In the event of a fire or explosion, notify the fire department immediately by dialing 911.

The Project Safety Officer and the Project Manager are to be notified by the Site Safety Officer as soon as practical and a written report prepared.

7.3 EMERGENCY TELEPHONE NUMBERS

Fire	911
Police Department	911
Paramedics	911

7.4 WORK SITE ADDRESS

Western Brake Company
1461 Park Avenue
Emeryville, California

7.5 CLIENT CONTACT

Mr. Larry Shultz , Union Bank
(213) 236-7315

7.6 HOSPITAL ADDRESS AND ROUTE

ADDRESS

Herrick Memorial Hospital
2110 Dwight Way
Berkeley, CA
845-0130

ROUTE

Take Park Avenue east to Marshall Avenue. Turn north and take Marshall to Stanford Avenue. Turn east on Stanford. It merges with Adeline Street. Take Adeline Street to Dwight Way and turn left. The hospital is on the north side of Dwight Way.

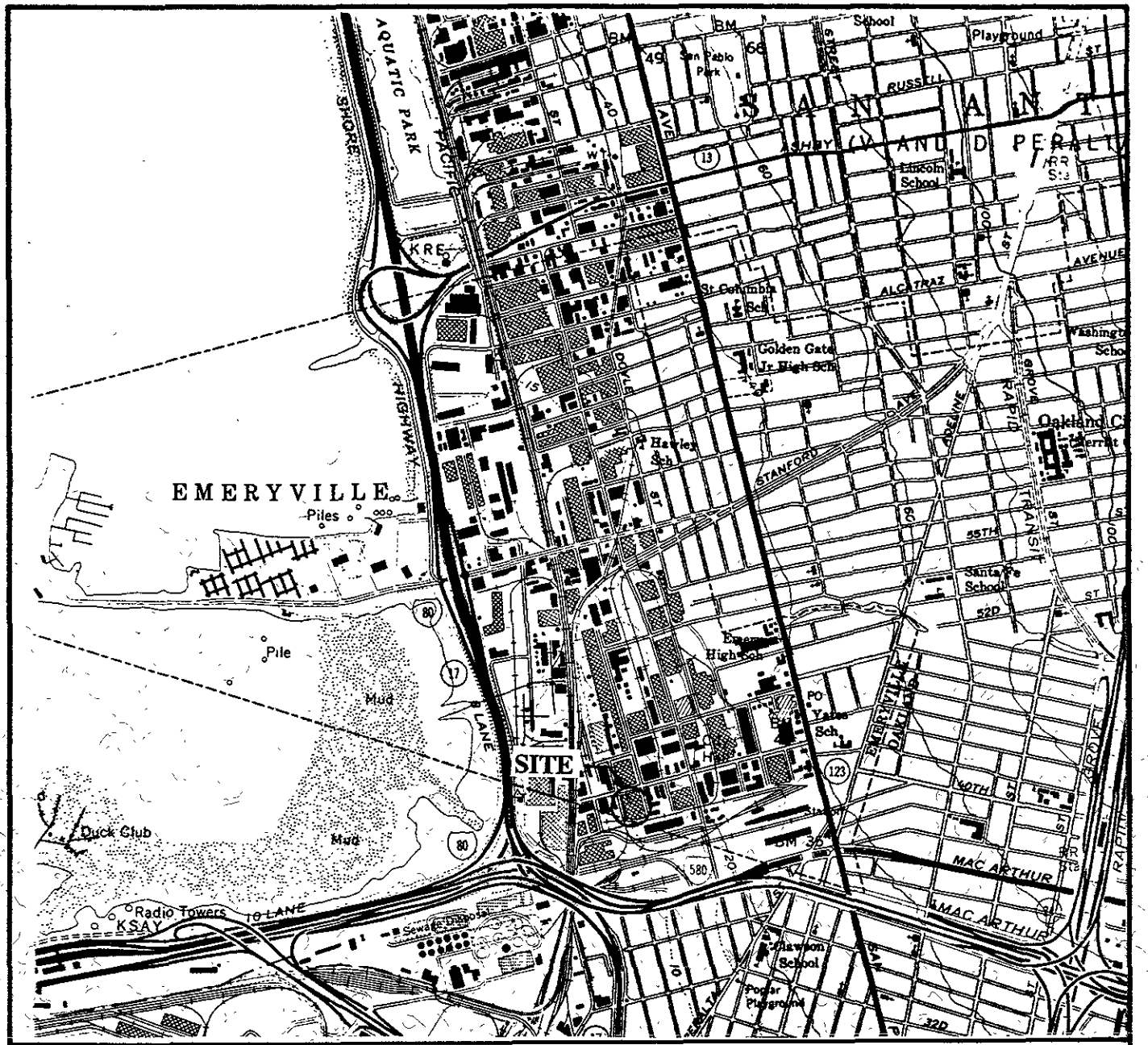
8.0 PROJECT PERSONNEL

Remedial Action Corporation:

Project Manager	Ed Sirota
Health and Safety Officer	Ed Sirota
Site Safety Officer	James Farrow or Gail Small
Field Personnel	To be designated

Subcontractors:

To be designated



NOTE:
1. BASE MAP FROM U.S.G.S. 7.5 MINUTE OAKLAND WEST (1959, PHOTO REVISED 1980) CA. TOPOGRAPHICAL QUADRANGLE

NORTH

0 1/2 1

APPPROXIMATE SCALE IN MILES

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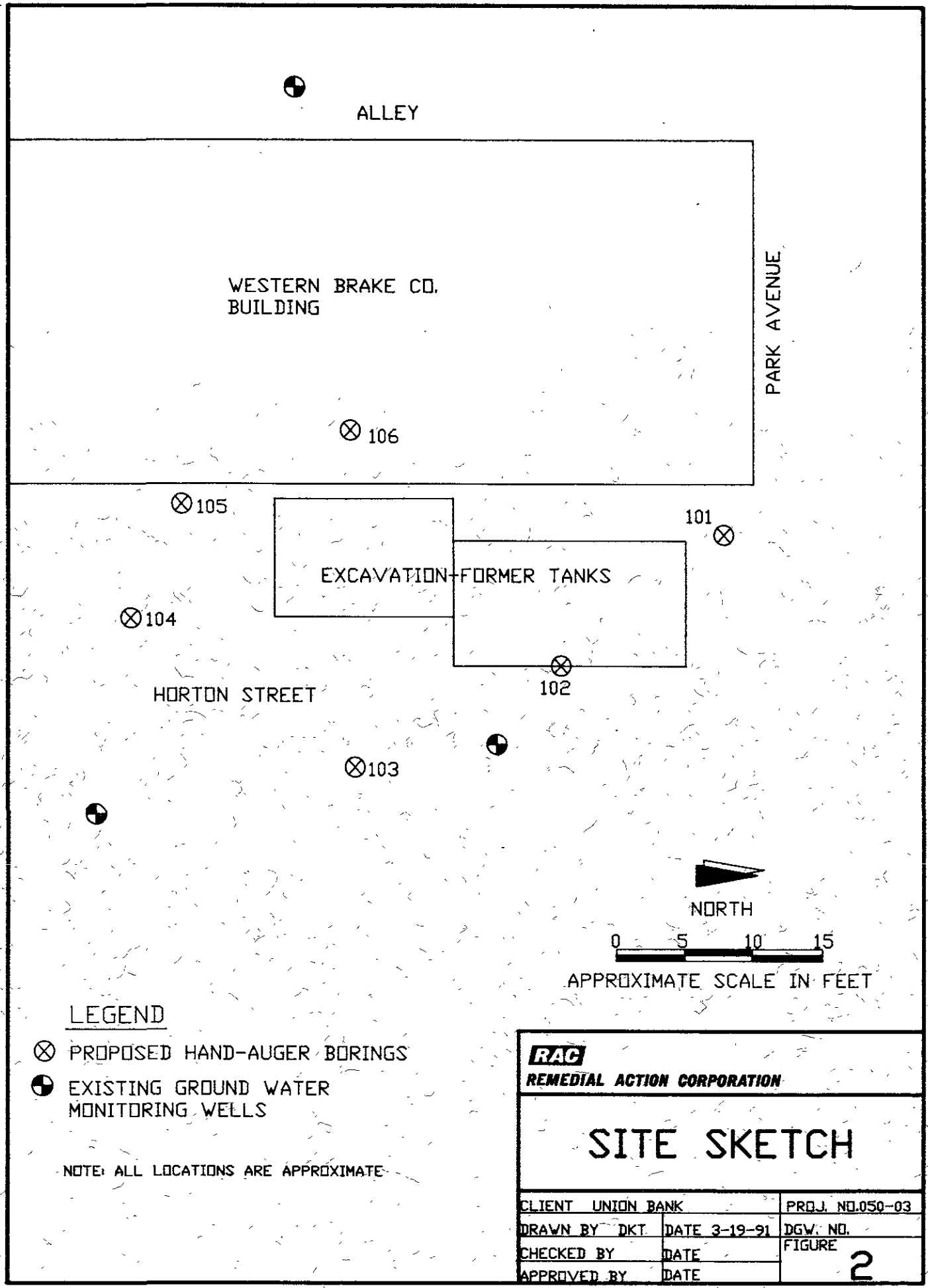
VICINITY MAP

CLIENT UNION BANK		PROJ. NO. 050-03
DRAWN BY DKT	DATE 3-19-91	DWG. NO.
CHECKED BY	DATE	FIGURE NO. 1
APPROVED BY	DATE	



LEGEND

⊗ PROPOSED HAND-AUGER BORINGS

◒ EXISTING GROUND WATER MONITORING WELLS

NOTE: ALL LOCATIONS ARE APPROXIMATE

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SITE SKETCH

CLIENT UNION BANK		PROJ. NO.050-03
DRAWN BY DKT	DATE 3-19-91	DGW. NO.
CHECKED BY	DATE	FIGURE 2
APPROVED BY	DATE	