Golder Associates Inc.

180 Grand Avenue, Suite 250
Oakland, CA USA 94612
Telephone (510) 239-9000
Fax (510) 239-9010

Golder Associates

July 21, 1997

Our Ref: 963-7137

11471, 11472, 11473, 11474, 11475, 11476, 11477, 11478

Spieker Properties
2200 Powell Street, Suite 325
Emeryville, CA 94608

Attention: Mr. John Winther, Vice President

RE: Findings and Recommendations
F.P. Lathrop Properties Acquisition
Emeryville, California

Dear Mr. Winther:

Enclosed are three (3) copies of our assessment of environmental conditions for your acquisition of a group of Final F.P. Lathrop properties in Emeryville, California. Our draft report and letter was previously submitted on January 23, 1997. This letter presents a summary of the findings of our "due diligence" environmental review for the Goldsmith-Lathrop Properties under consideration for purchase by Spieker Properties. The Emeryville properties include:

1. The Watergate Towers I, II and III at 1900, 2000 and 2200 Powell Street,
2. Charley Browns Restaurant at 1890 Powell Street,
3. The Bay Bridge Plaza at 5801 Christie Avenue,
4. An industrial strip building at 5855-5895 Christie Avenue, and
5. The Sherwin Williams Industrial Paint Store at 5813-5815 Shellmound Street.

Our findings are based on documents provided by Spieker Properties, a site reconnaissance of the subject properties, review of historic aerial photographs, maps and city directories and meetings with the Regional Water Quality Control Board (RWQCB), the Alameda County Department of Environmental Health (ACDEH) and the City of Emeryville Redevelopment Agency (ERA). A limited reconnaissance for asbestos containing materials (ACM) was performed by Fowler Associates for all buildings except Watergate Tower III which was constructed in 1985, after bans on the manufacture and use of asbestos-containing materials (ACM).

The following findings are applicable to all of the subject properties.

- All of the properties are part of property formerly owned and used by Fibreboard Corporation and it's predecessors for the manufacture of asbestos- and petroleum-containing products including roofing materials and flooring. Historic operations in the area included the use of hazardous materials and given the heavy industrial use and the limited environmental regulations at the time, it is expected that

hazardous materials are present in the soil and shallow groundwater beneath all of the properties.

- The properties are all within historic fill areas of San Francisco Bay. The fill material consists of construction debris, asbestos, slag, roofing and flooring materials mixed with varying amounts of soil. The thickness of the fill increases from east to west beginning near the railroad tracks approximately 200 feet east of Shellmound Street. Filling began to east in the late 1800's and proceeded westward into the late 1960's. The fill is approximately 25 feet thick in the area of the Watergate Towers.

- With the exception of the 5813-5815 Shellmound Street site, no other properties are currently under the oversight of any of the potentially concerned regulatory agencies (EPA, RWQCB, DTSC or Alameda County Department of Environmental Health [ACDEH]). After review of documents describing environmental conditions, the RWQCB has stated they that have no plans to regulate any of the sites. They also stated that they would be the primary lead agency with regard to subsurface conditions at these properties. A letter from the RWQCB documenting their current views on these properties is included in our report.

- Qualitatively, the risk to human health from the subsurface potentially hazardous constituents is considered acceptable due to a lack of potential pathways of exposure. The majority of the site areas are paved or covered by building slabs. The landscaped areas are minimal. In addition, many of the potentially hazardous constituents are not very volatile (metals, asbestos, and heavy petroleum products) and therefore the primary route of exposure would be through direct contact with subsurface materials. In instances where direct contact is possible (for example, excavation), appropriate health and safety measures can be used to reduce this risk of exposure.

- With the exception of the Watergate Tower III, all other buildings were constructed during the time when asbestos was used in building materials. Potentially Asbestos-Containing Materials (PACM) and some ACM were identified on the basis of a limited site reconnaissance and sampling by Fowler and Associates. The type and quantity of ACM and PACM are judged to be manageable and not involve excessive expenditures compared with structures of similar construction and age.

Other findings relative to one or more of the properties are as follows:

- Brownfields Initiative. The properties east of Interstate 80 are currently part of a Brownfields Initiative by the City of Emeryville Redevelopment Agency. The initiative is funded by a grant from the United States Environmental Protection Agency and as a first step in the process the City has hired a consultant to compile soil and groundwater quality information within the proposed Brownfields area of Emeryville. Formal implementation of the Brownfields Initiative for portions of Emeryville is approximately one to two years away. It is anticipated that

implementation of the Brownfields Initiative would result in the establishment of higher cleanup level goals for soil and groundwater, potential restrictions on property use (i.e. non-residential uses), and imposition of fees on properties within the area in order to perform regional monitoring and/or remediation activities. It is also anticipated that this regional approach would result in cost savings to individual property owners currently performing remediation and/or monitoring. Also, the city of Emeryville has indicated that as part of the Brownfields program, they would provide financial lending institutions "comfort" letters or possibly indemnification for future remediation of existing groundwater conditions. Soil contamination would remain the responsibility of the landowner under the Brownfields program. The impact of the Brownfields initiative on the subject properties is currently not clear and therefore, it would be advisable for property owners in the Emeryville area to follow the progress of this Initiative.

- Existing Underground Fuel Storage Tanks. There are two, 10,000-gallon, double-walled fiberglass underground fuel storage tanks (USTs) in use at the 2200 Powell Street Property. The USTs are operated by Goldsmith-Lathrop for use by tenants at the Watergate Towers. The tanks are permitted by the City of Emeryville and Alameda County. There were no records or other evidence indicating that released have occurred from the tanks.

- Active UST Release Site at 5813-5815 Shellmound. The Sherwin Williams building was formerly used by Lathrop Construction. Lathrop had an underground fuel storage tank in the northwest corner of the site. The tank has been removed and additional investigations have been conducted. The site is a listed petroleum release site under the oversight of the Alameda County Department of Environmental Health (ACDEH). The degree of investigations at the site have been influenced by releases of solvents from the adjacent property at 5800 Christie Avenue (currently the Good Guys Audio/Video Equipment Retail Store) to the subject site. The solvents were released by prior occupants of this adjacent property. Litigation between the 5800 Christie Avenue property owner (Croley and Herring Investment Company) and Lathrop is currently stayed according to Lathrop's attorneys (Crosby, Heafey, Roach & May). The ACDEH has requested additional characterization of the extent of petroleum products downgradient of the former UST. According to our conversations with the ACDEH, it is unlikely that remediation of soil and/or groundwater will be required however, continued groundwater monitoring and a risk-based assessment may be necessary steps to achieve closure. Lathrop's consultant, Cambria, has recently submitted a workplan to ACDEH for additional investigation and maintains that the petroleum constituents detected in the soil and groundwater are not significant and are not a result of releases from the former UST. At this time it is premature to estimate the potential future costs to obtain case closure.

Recommendations:

1. Disturbance of underlying soil and/or fill materials should be minimized at all sites. Appropriate worker health and safety and characterization of excavated materials will be necessary when excavations are proposed. The potential risks and liabilities are manageable through the implementation of risk management or operation and maintenance plans for subsurface activities. Individual, site specific plans for each building may be preferred. The preparation of risk management plans for the subject properties are estimated at approximately $6,000 to $8,000 for each site.

2. Operation and maintenance (O & M) plans for the testing of potential asbestos-containing materials (PACM) prior to renovation activities that may disturb PACM are recommended for all buildings except Watergate Tower III. Tower III was constructed after bans on the use of asbestos in building materials. O & M plans are expected to cost approximately $5,000 per building. In addition, notification of tenants and building management employees of the presence of PACM and ACM is recommended per CAL/OSHA Title 8, Section 1529 (k).

3. It is our recommendation that the existing underground tanks at 2200 Powell Street be removed unless there are sufficient economic reasons to continue their operation. We obtained a preliminary cost estimate from Paradiso Construction for removal of these tanks. The preliminary estimate for removal of the tanks and sampling and analyses beneath the tanks is $50,000. This estimate does not include shoring (an additional cost of approximately $20,000 if needed) or removal and replacement of landscape materials over and in the vicinity of the USTs.

4. It is recommended that Spieker Properties, should the properties be acquired, follow the progress of the City of Emeryville Brownfields Initiative. Participation in the program may prove beneficial to landowners within the Brownfields area.

In general, based on the information that we have reviewed and the value of the proposed transaction, it is our opinion that the environmental risks associated with the purchase of the subject properties are manageable. These properties will require expenditure of additional funds associated with potential asbestos containing materials and subsurface fill materials that contain hazardous constituents as compared with newer properties overlying clean soil and groundwater. Some cost contingencies should be considered in the economic analysis for the acquisition. However, the additional costs will largely be dependent on future development and renovation plans that Spieker may undertake.

If you have any questions or comments, please call.

Sincerely,

GOLDER ASSOCIATES INC.

Diane L. Sarmiento, P.E.
Senior Engineer

Charles H. Almestad, R.G., C.HG.
Associate

DLS/CHA/ca

Golder Associates Inc.

180 Grand Avenue, Suite 250
Oakland, CA USA 94612
Telephone (510) 239-9000
Fax (510) 239-9010

Assessment of Environmental Conditions

Watergate Towers, Powell Street
Charlie Browns Restaurant
Bay Bridge Plaza, 5801 Christie Avenue
5865-5895 Christie Avenue
Sherwin Williams, 5813-15 Shellmound Street
Emeryville, California

Prepared for:

Spieker Properties
2200 Powell Street, Suite 325
Emeryville, California 94608

Prepared by:

Golder Associates Inc.
Oakland, California

Diane L. Sarmiento, P.E.
Senior Engineer

Charles H. Almestad, R.G. C.HG.
Associate

June 16, 1997

963-7137

Table of Contents

LIST OF FIGURES

LIST OF APPENDICES

1. INTRODUCTION

This report presents the results of environmental review and assessment of the F.P. Lathrop Properties under consideration for purchase by Spieker Properties. There properties are all located along or in the immediate vicinity of Powell Street in Emeryville, California (Figure 1). The properties are:

1. the Watergate Towers I, II and III at 1900, 2000 and 2200 Powell Street,
2. Charley Browns Restaurant at 1890 Powell,
3. the Bay Bridge Plaza at 5801 Christie Avenue,
4. an industrial strip building at 5855-5895 Christie Avenue, and
5. the Sherwin Williams Industrial Paint Store at 5813-5815 Shellmound Street.

The purpose of our environmental review and assessment was to identify current, recognized environmental conditions that may exist at the property. ASTM Practice E 1527- 94, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, defines recognized environmental conditions as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, past release or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." Because all of the subject properties have or can be expected to have documented releases of potentially hazardous substances or petroleum products; our assessment included a qualitative evaluation of the likelihood that the subsurface site conditions may pose major environmental risks. Major risks are considered to be existing, recognizable environmental conditions that would require expenditures that would significantly affect the value of the property taking into consideration the proposed continued use of the subject buildings.

2. SCOPE OF WORK

The scope of work included the following:

- Review of reports and documents provided by Spieker
- Acquisition and review of historic aerial photographs, maps and City directories
- Reconnaissance of the subject properties
- Walkthrough of buildings constructed prior to 1982 for identification of potential asbestos-containing materials (PACM). The walkthrough was conducted by Fowler Associates and included limited sampling of potentially friable PACM.

- Meetings and/or discussions with regulatory agencies including the San Francisco Bay Regional Water Quality Control Board (RWQCB), the Alameda County Department of Environmental Health (ACDEH), the City of Emeryville Redevelopment Agency, and the California Department of Health Services Division of Food, Drug and Radiological Safety (CA-FDRS)
- Preparation of this report and miscellaneous correspondence.

3. AVAILABLE DOCUMENTATION

Numerous environmental documents were provided by Spieker and reviewed by Golder to assess current site conditions. The documents are listed in the Reference Section of this report. The primary documents used in our evaluation are:

1) Phase I, Phase II and Phase III Site Assessments for the Watergate Towers Complex, prepared in 1989 and a 1996 Update Summary Memorandum by Woodward-Clyde Consultants (WCC) for Goldsmith-Lathrop.
2) Phase I Environmental Site Assessment for the Bay Bridge Plaza, 5801 Christie Avenue prepared by Woodward-Clyde in 1996.
3) Environmental investigation reports for the 5813-5815 Shellmound Street Site prepared by Cambria for Lathrop.

There were no reports specifically addressing the Charley Brown Restaurant or the Christie Industrial Building at 5855-5895 Christie Avenue. Information on these sites was gathered from documentation for the adjacent properties, the site reconnaissance and some additional historical review.

4. HISTORY AND CONDITIONS OF SITE AREA

4.1 General History of Site Area

Development of the town of Emeryville began in the 1860's after the purchase of 185 acres of land by Joseph S. Emery. At this time the area of Emeryville west of the Southern Pacific and Santa Fe Railroad tracks (Figure 1) was part of San Francisco Bay. As development of Emeryville progressed, the margins of the bay were filled. In the early 1900's, the area north of Powell Street and west of the railroad tracks was purchased and developed by the Paraffine Company. By 1937 when the construction of Interstate 80 along the west side of Emeryville was complete, the Paraffine Companies had expanded their manufacturing operations along the north side of Powell Street and had filled a small area on the west side of the new highway. The new facilities included additions to its linoleum plant, floor covering and paint warehouses (Oakland Tribune, 1937). The Paraffine Company was later acquired by PABCO (date unknown) and Fibreboard Corporation in 1957 (WCC, 1996). Filling of the area west of the Highway along Powell Street was continued by Fibreboard Corporation into the late 1960s. Sanborn Fire Insurance Maps for the subject properties are included as Figures 5

through 9. Additional site specific historical information is presented under the findings for each property.

All of the subject properties are part of property formerly owned and used by Fibreboard Corporation and it's predecessors for industrial manufacturing. Asbestos and petroleum containing products including roofing materials and flooring and paints were manufactured, stored and disposed of at the site. Industrial wastes from other local industries may also have been used as fill materials. It is expected that hazardous materials are present throughout the fill materials beneath all of the properties.

4.2 General Subsurface Conditions

The properties are all within historic fill areas of San Francisco Bay. The fill consists of construction debris, asbestos, slag, roofing and flooring materials mixed with varying amounts of soil. The thickness of the fill increases from east to west beginning near the railroad tracks approximately 200 feet east of Shellmound. Filling began to east in the late 1800's and proceeded westward into the late 1960's. The fill is approximately 2.5 to 4 feet thick in the area of the 5813-5815 Shellmound property increasing to approximately 25 feet thick in the area of the Watergate Towers. Bay mud underlies the fill materials and similarly thickens to the west. Underlying the soft Bay Muds are stiff silty and sandy clays. The depth to first encountered groundwater at all the sites is less than approximately 10 feet below ground surface.

5. SITE SPECIFIC FINDINGS

The following sections present information on a site specific basis. Specific site information includes a site description, specific historical use information, a summary of prior investigations and information, a site reconnaissance and a summary of information on asbestos containing materials as reported in the letter from Fowler Associates are included in Appendix A.

5.1 5813-5815 Shellmound Street, Sherwin Williams

The Shellmound property is a 27,764 square foot (sf) parcel on the southwest corner of the bend in Shellmound Street and bounded by the Powell Street overpass on the south (Figure 2). The existing, approximately 13,420 sf, single-story warehouse building was constructed in the eastern portion of the property by Lathrop in late 1971 (WCC, 1971). The concrete, tilt-up warehouse is supported on piles approximately 25 to 30 feet deep. The western portion of the property is an asphalt paved parking lot.

The property is within the proposed Brownfields Initiative area of the City of Emeryville.

5.1.1 Site Specific History of Use

The property was formerly part of a large manufacturing property used by the Paraffine Companies and later Fibreboard Corporation. In 1911, the subject property was part of San Francisco Bay (Figure 5). In 1923, the subject property was part of a salt water reservoir constructed out into San Francisco Bay (Figure 6). Between 1923 and 1950 the property was filled (Sanborn, 1950). The 1950 and 1952 Sanborn Map indicates that the property had no structures and was used for the storage of baled rags. In the few years prior to development by Lathrop in 1971 there were no structures indicated to be present at the site (Sanborn, 1967; Cambria, 1995). Lathrop Construction used the existing building as a construction warehouse and offices from approximately May 1972 to April 1987 and installed an underground fuel storage tank in the northwest corner of the parking area. This tank was removed in 1989 (KTW, 1989). In approximately 1989, Sherwin Williams leased the northern and eastern portion of the building for warehousing and the storage of industrial paints. The southwestern portion of the building was leased to various tenants for storage and more recently is used by the GoodGuys for installation of car radios.

5.1.2 Summary of Prior Investigations.

A geotechnical investigation was conducted by WCC in 1971 prior to construction of the existing building. Environmental investigations have been conducted by Lathrop's consultant, Cambria, because of the presence of the former underground fuel storage tank (UST) and the identification of petroleum hydrocarbons in the vicinity of the former UST (Cambria, 1995, 1996). In addition, subsurface investigations have been conducted by the owner of the adjacent property west of the site (5800 Christie Avenue) (AWD, 1989; ETS, 1991, 1992, 1993; Gils, 1988). A tenant on the adjacent property handled solvents that were later discovered in soil and groundwater along the western boundary of the 5813-5815 Shellmound property.

Litigation between the two property owners related to sources and responsibility for chemicals detected in soil and groundwater is currently on hold (Crosby et al., verbal comm., 1996). The UST release is under the oversight of the Alameda County Department of Environmental Health (ACDEH) and in November 1996 a workplan for additional investigation and monitoring was submitted by Cambria to the ACDEH for approval (Cambria, 1996). We discussed the petroleum release with Ms. Susan Hugo, the caseworker for the ACDEH who informed us that she believes that active remediation of the release would not likely be required due to the widespread presence of petroleum hydrocarbons from multiple historic sources beneath this area of Emeryville. However, she does believe that additional routine sampling of groundwater monitoring wells, and a risk assessment to assure that there are not unacceptable risks of exposure to humans may be necessary prior to her agency recommending case closure.

5.1.3 Subsurface Conditions

The site is underlain by approximately 2.5 to 4 feet of fill over 5 to 6 feet of soft, bay mud. The bay mud is underlain by silty and sandy clays. Groundwater is less than 10 feet below ground surface (bgs) and fluctuates from approximately 4 feet to 8 feet bgs. Petroleum hydrocarbons and volatile organic compounds (VOCs) have been detected in soil and groundwater samples from the site. A summary list of potentially hazardous materials in soil and groundwater at the site are included as Table 1 and a summary table of analytical results are included in Appendix B. Borehole logs from prior site investigations are also included in Appendix B. Figure 3 illustrates the location of boreholes at the property.

5.1.4 Site Reconnaissance

Golder Associates personnel visited the site on November 8, 1996 with Mr. Bob Slaney of Goldsmith-Lathrop. Certified Asbestos Consultants from Fowler Associates also visited the site on November 8, and December 2 and 3, 1996 to assess the potential for asbestos containing materials (ACM). Sherwin Williams currently leases the majority of the building for retail sales of industrial paints and supplies. Paints and paint products (thinners, cleaners etc.) are stored at the warehouse. In addition, some mixing of paints occurs in the northeast corner of the building. Paint spills were evident on the concrete floor primarily in the area of the large mixer. A compressor along the southeast wall of the building was observed to have leaked oil onto the concrete floor. Shallow groundwater monitoring wells were observed in the parking lot on the west side of the building. In 1989, following the Loma Prieta earthquake, Sherwin Williams filed a spill report with the ACDEH indicating that approximately 9,625 gallons of paints and cleaners had spilled as a result of the earthquake (Sherwin Williams, 1990). Sherwin-Williams cleaned up and disposed of the spilled materials as hazardous waste (Sherwin Williams, 1990). This information is included in Appendix B along with photographs taken at the time of the site reconnaissance. This Sherwin Williams facility is listed as a large quantity hazardous waste generator (WCC, 1996).

5.1.5 Asbestos Containing Materials

A visual survey for ACM was conducted by Fowler Associates and the results are presented in Appendix A. No friable ACM was observed in the building. However, based on the age of the building and the prevalence of ACM in flooring, roofing, insulation, ceiling and wall materials at the time of construction it is likely that some ACMs are present at the site. Floor tiles and associated adhesives, joint tape compound on sheetrock walls, and wall texturing in the restrooms are potential ACMs (PACMs) observed at the site.

5.2 5801 Christie Avenue - Bay Bridge Plaza

This property is an approximately 94,000 sf parcel developed with six-story, concrete, commercial office building on the west side of the parcel and the remainder of the parcel is paved parking area (Figure 4). The property is bounded to the north by a one-story concrete building (5855-5895 Christie Avenue), to the east by Christie Avenue, to the south by a BP Gasoline Service Station and Denny's Restaurant and to the west by Interstate 80. The building was constructed by Lathrop in 1968. We understand that the building sustained damage as a result of the 1989 Loma Prieta earthquake and subsequently some structural renovation was performed. According to Mr. Bob Slaney of Goldsmith-Lathrop the roof was replaced in 1995.

5.2.1 Site Specific History of Use

Prior to original development, the site was part of the San Francisco Bay (Sanborn 1923). Between approximately 1923 and 1947 the site was developed by the Paraffine Companies. The 1950 and 1952 Sanborn Maps indicate that the subject property contained buildings and a parking area for the Paraffine Companies Inc. linoleum factory (Figures 7 and 8). In addition, nine aboveground oil storage tanks were located on the adjacent property to the south (currently a Denny's Restaurant). Between 1952 and 1967 the linoleum factory was demolished. The 1967 Sanborn Map indicates that the subject site and immediately adjacent properties within the north portion of the intersection of Powell Street and Christie Avenue are vacant. The 1968 aerial photograph shows the subject site and adjacent properties were developed as they are today.

Tenants in the building have varied over the years, however, in general the tenants have been office space users and not users and/or generators of hazardous materials. According to the WCC report (WCC, 1996) the only exception was a former tenant who used some solvents that were released into the ventilation system. The tenant no longer leases space in the building and tenant leases prohibit the use, handling and disposal of hazardous materials.

5.2.2 Summary of Prior Investigations

The only information available on prior investigations was a Phase I Environmental Site Assessment prepared for the 5801 Christie Avenue by Woodward-Clyde and dated May 23, 1996. This report includes a Vista data base search for information on all known and listed hazardous materials release sites, waste generators, registered underground fuel storage tanks. The subject property is not a listed site.

5.2.3 Subsurface Conditions

There is no subsurface information available for this specific site. Consequently, information on adjacent and nearby sites is used as the basis for information on likely conditions beneath the Bay Bridge Plaza Property.

The site was historically part of San Francisco Bay and was filled prior to construction of the first structures by the Paraffine Companies (approximately 1947). Based on subsurface investigations at other similarly filled properties that were formerly part of the Paraffine Company's facility, it is expected that the fill materials consist of soil with varying amounts of industrial materials generated by the Paraffine Company's operations and/or adjacent industrial users. The fill likely contains potentially hazardous materials similar to those reported at other sites in the area including petroleum hydrocarbons, semi-volatile organics (tars and asphalt compounds), volatile organics and metals. The fill materials are estimated to be between 4 and 15 feet thick and underlain by Bay Mud estimated to be between 5 and 40 feet thick (WCC, 1996).

5.2.4 Site Reconnaissance

On November 8 , 1996 we visited the subject site and toured the building with Mr. Bob Slaney of Goldsmith-Lathrop. We visited the mechanical rooms on the roof of the building and selected offices spaces. In addition, we walked the outdoor areas of the site. As typical for mechanical systems, small quantities of chemicals used in the mechanical systems (air conditioning and water) were observed. The chemicals are fed automatically into their respective systems.

No visual evidence of spills, leaks or releases of hazardous materials to soil and/or groundwater were observed. There was no visual evidence of groundwater monitoring wells, grouted boreholes, or stained soil or pavement. There were also no indications of underground storage tanks. Photographs taken during our reconnaissance are included in Appendix C.

5.2.5 Asbestos Containing Materials

Fowler and Associates performed a visual reconnaissance of the subject property to assess the potential for ACM. Because of the age of the structure some ACM may be present, however, no clearly identifiable AMC were observed. New building materials installed during the extensive post 1989 earthquake repair are not suspected ACM. The findings of the survey are summarized in Appendix A.

5.3 5855-5895 Christie Avenue, Industrial Building

The Christie Avenue Industrial Building is a one-story, concrete, tiltup structure located immediately north of the 5801 Christie Avenue Building (Figure 1). The Building was also constructed in approximately 1968. The building has typically been used for retail and warehouse space. The parking lot for the 5801 Christie Avenue building is common to the industrial building.

5.3.1 Site Specific History of Use

The history of use prior to development of the existing structure is the same as for the 5801 Christie Avenue Building. Prior to original development the site was part of the San Francisco Bay (Sanborn 1923). Between approximately 1923 and 1947 the site was developed by the Paraffine Companies. The 1950 and 1952 Sanborn Maps indicate that the subject property contained buildings for the Paraffine Companies Inc. linoleum factory (Figures 7 and 8). Between 1952 and 1967 the linoleum factory was demolished. The 1967 Sanborn Map indicates that the subject site and immediately adjacent properties within the north portion of the intersection of Powell Street and Christie Avenue are vacant. The 1968 aerial photograph shows the subject site and adjacent properties were developed as they are today.

Tenants in the building have included a bearing supply company, construction companies, a dance studio, a manufacturer of medical supplies for diagnostic testing, and a coffee and sandwich shop. Appendix D contains lists of tenants obtained from selected Polk and Haines City Directories. We understand that Meta- Physics Inc. may have produced medical supplies that contained radioactive materials. As a result, we contacted the California Department of Health Services (CDHS), Food, Drug and Radiology Group. They had no records available on the subject tenant but were familiar with the company and its manufacturing operations. According to the CDHS, Meta Physics Inc. was required by the state to perform testing and obtain clearance approval from the State to demonstrate that no radioactive materials or contamination was left at the facility (Ed Bailey, verbal commun). In addition, the radioactive materials used in the products manufactured at this site have short lives (i.e. their half-lives are in hours and days compared with radioactive elements such as uranium or plutonium) and consequently it is very unlikely that residual constituents are present.

5.3.2 Summary of Prior Investigations

No information on any prior investigations specifically for the subject site was available. The review of known contaminated sites for the 5801 Christie Avenue property included the subject property. The property is not listed in regulatory agency database files (WCC, 1996).

5.3.3 Subsurface Conditions

There is no subsurface information available for this specific site. Information on adjacent and nearby sites was used as the basis for information on likely conditions beneath this property and the conditions are likely to be the same as those beneath the adjacent Bay Bridge Plaza.

The site was historically part of San Francisco Bay and was filled prior to construction of the first structures by the Paraffine Companies (approximately 1947). Based on subsurface investigations at other similarly filled properties that were formerly part of the Paraffine Company's facility, it is expected that the fill materials consist of soil with varying amounts of industrial materials generated by the Paraffine Company's operations and/or adjacent industrial users. The fill likely contains potentially hazardous materials similar to those reported at other sites in the area including petroleum hydrocarbons, semi-volatile organics (tars and asphalt compounds), volatile organics and metals. The fill materials are estimated to be between 4 and 15 feet thick and underlain by Bay Mud estimated to be between 5 and 40 feet thick (WCC, 1996).

5.3.4 Site Reconnaissance

On November 8 , 1996 we visited the subject site and toured the building with Mr. Bob Slaney of Goldsmith-Lathrop. We walked into a few of the spaces and observed that the building consists of concrete tiltup walls and a flat wood roof that was recently replaced. The building contains a number of skylights. The water piping and other systems are directly observable. In addition, we walked the outdoor areas of the site. At the time of our reconnaissance a contractor was paving the area along the west end of the site and the small walkway at the rear of the building leading from the dance studio.

No visual evidence of spills, leaks or releases of hazardous materials to soil and/or groundwater were observed. Visual evidence includes the presence of groundwater monitoring wells, grouted boreholes, or stained soil or pavement. There were also no indications of underground storage tanks. Photographs are included in Appendix D.

5.3.5 Asbestos Containing Materials

Fowler and Associates performed a visual reconnaissance of the subject property to assess the potential for asbestos containing building materials. Because of the age of the structure some asbestos containing materials may be present, however, no clearly identifiable asbestos containing materials were observed. Potential ACM included joint tape compound on sheetrock walls and floor tile adhesive installed prior to the 1986 renovations. The findings of the asbestos survey are summarized in Appendix A.

5.4 Watergate Office Complex

The Watergate Office Complex consists of three, multi-story commercial office buildings on the north side of Powell Street and west of Interstate 80 (Figure 1). The site is approximately 16 acres in size and consists of three parcels. The towers were constructed by Lathrop in late 1972 (Tower I at 1900 Powell), 1980 (Tower II at 2000 Powell) and 1985 (Tower III, 2200 Powell). The complex also includes a three-story parking garage and, for purposes of this report, a third building, Charley Brown's Restaurant (1890 Powell), on the northeast corner of the property.

Tower I is a 12-story, poured-in-place concrete building with approximately 216,000 square feet of rentable space. Tower II is a 12-story, steel frame structure with approximately 229,000 square feet of rentable space. Tower III is a 16-story steel form structure with approximately 368,000 square feet of rentable space. Adjoining Tower III to the south and west is a three-story parking structure. Two underground fuel storage tanks with dispensers are associated with the garage. There are no indications that the tanks have leaked. The Restaurant (Charlie Brown's) is a one-story wood structure constructed at the water's edge. The remainder of the site consists of asphalt paved parking areas with limited landscape areas along strips between parking aisles and along the shoreline. Five shallow groundwater monitoring wells are also present at the site.

5.4.1 Site Specific History of Use

The existing buildings constitute the first development of the subject properties. Historically the site was part of San Francisco Bay. Beginning in the 1940s and until the mid 1960's the site and surrounding area was filled. Impoundment dikes of soil, rock and debris were constructed on bay tidelands and then the area within the dikes was filled with materials including construction debris, foundry casing sands and slag, soil and industrial wastes and Fibreboard Corporation wastes from the production of roofing, flooring and other building materials. In approximately 1968, the property was purchased by Lathrop and the entire site was capped with engineered fill, pavement and structural foundation slabs. Aerial photographs illustrating the progression of site filling and development are included in Appendix E.

Since commercial development of the site there have been a number of tenants in each of the buildings. In general, the tenants are financial institutions, insurance companies, consultants, management companies and the local government agencies. The use of the spaces by the tenants have not included manufacturing or other types of use that include hazardous materials except those normally used in the office environment (copying machine supplies, etc.). Major tenants have include the City of Emeryville, GE Capital, Sybase, Chiron, Law & Economics, Alta Bates Health System, IA Corporation, Copus Technology, and Levine Fricke, an environmental consulting firm.

5.4.2 Summary of Prior Investigations

Prior investigations for the site have consisted of geotechnical/foundation investigations for the existing structures and three phases of environmental investigation. All of these investigations were performed by Woodward-Clyde for Lathrop.

The geotechnical investigations consisted of drilling of boreholes to develop recommendations for the building foundations. Although, materials encountered are described, no chemical analysis of samples was performed as part of these investigations. In 1989, in order to refinance the property, Lathrop had WCC perform Phase I, II and III environmental site assessments. The Phase I assessment consisted of review and summary of existing information. The Phase II assessment consisted of soil sampling, installation of monitoring wells and analyses of soil and groundwater samples. The Phase III assessment consisted of confirmation of previous groundwater sampling results, a qualitative assessment of the risk of exposure, and a limited hydrogeologic assessment to estimate the permeability of the fill materials and the fluctuation of groundwater levels with the tides.

5.4.3 Subsurface Conditions

The site has an elevation of approximately 11 feet above mean sea level (MSL). Subsurface materials at the Watergate Complex consist of approximately 25 feet of fill over Bay Mud. Bay Mud is a soft clay that has a low permeability. The Bay Mud is underlain by stiffer clays and relatively dense sands. The depth to first groundwater is approximately 7 to 10 feet below ground surface (bgs). A range of chemical constituents were detected in soil and groundwater samples from the site. The constituents detected in soil and groundwater include petroleum hydrocarbons (including derivatives of gasoline, diesel and asphalts), benzene, toluene, xylene, arsenic, lead, nickel, zinc and polynuclear aromatic hydrocarbons (PNAs). Table 2 is a list of materials encountered beneath the property. Appendix E contains borehole logs and a summary of the constituents and concentrations reported for samples from the Watergate Complex Property. We understand that since 1989 no additional sampling or analysis has been performed at this site. Asbestos was visually observed in the soil samples but was not detected in groundwater samples.

WCC concluded that there is no significant threat to human health and the environment. Although fill and shallow Bay Mud beneath the building contains potential hazardous constituents the results of WCC's risk assessment indicate that there is no direct route of exposure to humans because the site is "capped" and the concentrations are not of sufficient magnitude. The only potential pathway of exposure is by excavation into the fill materials. If excavations are planned then appropriate health and safety precautions as well as appropriate characterization, handling and disposal of the excavated fill should be followed.

5.4.4 Site Reconnaissance

On November 8, 1996, we walked through the mechanical areas of Tower I and looked at a few office spaces. We also walked the perimeter of the buildings in an attempt to locate some of the existing monitoring wells. None of the existing wells could be located based on the WCC map however, some of the wells are in landscaped areas or may be located beneath parked cars. We understand that the wells are still present and have not been abandoned. The existing underground fuel storage tanks are located in the landscaped area between the parking structure and Powell Street. Differential settlement of the parking areas was observed and the portions of the parking lot appeared to have been repaired with new asphalt. Tower II was undergoing cleaning and repainting of the exterior.

5.4.5 Asbestos Containing Materials

On November 8 and December 2 and 3, 1996 Fowler Associates conducted a survey of Tower I, Tower II and the Charley Browns restaurant. Based on the age of these structures some asbestos containing materials are likely to be present. We understand that many of the interior spaces have been renovated and therefore Lathrop believes that the extent of ACM is limited. A few samples of suspect ACM were collected by Fowler. The results are included in Appendix A and indicate that there are some ACMs and PACMs in the building but the quality and type of ACM and PACM are manageable from a cost and property management perspective.

6. REGULATORY AGENCY INFORMATION AND BROWNFIELDS INITIATIVE

The properties east of Interstate 80 are within an area that the City of Emeryville Redevelopment Agency is seeking to implement a "Brownfields" program. The City was awarded a grant from the U.S. Environmental Protection Agency to compile existing subsurface and historical information on soil and groundwater quality. Recognition of this area as "Brownfields" is expected to encourage redevelopment of this portion of the city as the City and regulatory agencies will formally acknowledge that there are subsurface hazardous materials and affected groundwater in the area, that the migration potential to potential receptors is low or manageable and that groundwater remediation is therefore not appropriate. The area of the Emeryville peninsula and the Watergate Complex is currently not included in the Brownfields initiative area.

On November 8, 1996 Golder met with Mr. Ignacio Dayrit of the City of Emeryville Redevelopment Agency. Mr. Dayrit gave us an overview of the initiative and his expectations regarding the outcome of the initiative. The concept is that following compilation of information on groundwater quality, preliminary screening levels for the reported chemical constituents will be developed. These levels will be selected with the assumption that the shallow groundwater is not and will not be a potential drinking water resource. The groundwater quality will be monitored on a regional basis as opposed to a site by site basis.

The idea is property owners or responsible parties with existing monitoring programs can cease their site specific monitoring and contribute money to the regional monitoring program and save money. In return the City with Memorandums of Understanding from the regulatory agencies (Regional Water Quality Control Board (RWQCB), Department of Toxic Substances Control (DTSC) and US EPA) will issue letters to property owners or prospective purchasers stating that the City has assumed liability for the groundwater and the groundwater monitoring program. The Brownfields program will not likely include "hot spot" areas or areas of sites where significant chemicals have been released. Soil contamination will remain the responsibility of the property owner. The initiative is an attempt to recognize the regional nature of subsurface contamination in Emeryville and develop a consistent, and reasonable approach to managing the contamination and encourage redevelopment.

Because of the potential financial risks associated with the known subsurface conditions at the sites, in particular at the Watergate Complex that is not included in the Brownfields Initiative, we consulted with the RQWCB and the ACDEH regarding the potential need for further action at these properties.

The ACDEH is currently the lead agency for the reported UST release at the 5813-5815 Shellmound Property. According to Ms. Susan Hugo, the site caseworker for the ACDEH, she does not believe that active remediation of the petroleum hydrocarbons reported beneath the site will be required. She has requested additional characterization of the extent of petroleum hydrocarbons and Lathrop's consultant Cambria has presented a workplan (November 7, 1996) to the ACDEH for approval. Additional future actions may consist of a semi-qualitative risk assessment and groundwater monitoring to demonstrate that the site qualifies as a low risk case. Recent guidelines from the RWQCB define a low risk site and based on the current site information, we expect that the Shellmound site is a low risk site.

The RWQCB was consulted regarding the Watergate Complex and specifically the need for further action at this property that is not included within the Brownfields Initiative area. RWQCB staff reviewed the WCC reports and aerial photographs and concluded that based on the information they reviewed that the site is not currently a concern to them, it is not under regulatory agency oversight and they do not expect it to be in the near future. Their opinion was that the potentially greatest concern with regard to the site was the potential for groundwater beneath the landfill to move contaminants into the bay. They appreciated the difficulty in trying to distinguish releases from the landfill versus releases directly to the San Francisco Bay and they currently do not have a strategy to address this potential concern. A letter from the board summarizing their opinions is included as Appendix F.

7. CONCLUSIONS

On the basis of our review of documents provided by Spieker, our site reconnaissance, review of supplemental historical information and discussions with regulatory personnel and others familiar with the subject properties we conclude that:

- Soil and shallow groundwater beneath all of the subject properties is known or likely to contain potentially hazardous materials resulting from historic industrial use and filling of the sites. In addition, it is possible that former and current underground fuel storage tanks (5813 Shellmound and 2000 Powell Street, Watergate III) may have impacted soil and/or groundwater. Offsite sources of volatile organic compounds have also been reported in soil and groundwater beneath the western portion of the 5813 Shellmound Property. There is no evidence to suggest that the existing tanks at 2200 Powell Street have leaked.

- Qualitatively the risk to human health and the environment has been deemed acceptable because the potentially hazardous materials are located beneath the site and covered with clean fill, buildings and pavement such that there are no direct routes of exposure. Subsurface excavation into these materials could result in temporary exposure to chemicals, however, these exposures can be mitigated by implementing appropriate worker health safety measures.

- With the exception of the former tank release at 5813-5815 Shellmound Street, none of the properties are under current regulatory oversight nor are they likely to come under agency oversight in the foreseeable future.

8. REFERENCES

WATERGATE OFFICE TOWERS

CCI, 1996. Letter, Evaluation of Environmental Conditions at Watergate Office Towers, Emeryville, CA. August 20, 1996 by Compliance & Closure Inc.

Crosby, Heafey, Roach & May, 1989. Letter re sites identified by RWQCB under Calderon and SWAT ranking. June 15, 1989.

Goldsmith & Lathrop, 1989. Letter re: information on Watergate Office Towers:
Tank test results, PG&E letter re transformers, fiberglass insulation, and transmittal letters re WCC reports. August 30, 1989 to Ms. Robin Ijams, Michael Brandman & Associates.

Goldsmith & Lathrop, 1989. Transmittal letters to RWQCB, DTSC, EPA and ACEHS, re Watergate Complex Phase One and Two WCC investigation reports.

LaBar, undated, Description of Site and Improvements, Watergate Office Towers, Emeryville, CA

WCC, 1989a. Report, Phase I Environmental Site Assessment, Lathrop Property, Emeryville, California prepared for F.P. Lathrop, January 24.

WCC, 1989b. Report, Phase II Preliminary Environmental Site Assessment, Lathrop Property, Emeryville, California prepared for F.P. Lathrop, March 13.

WCC, 1989c. Report, Phase III Preliminary Environmental Site Assessment, Lathrop Property, Emeryville, California, June 16.

5813-5815 Shellmound

_____, undated. Environmental Documents List, Exhibit M, 2 pages

ACEHS, 1988, Inspection and HMBP for 5815 Shellmound, Sherwin Williams Co.

ACEHS, 1989. Hazardous Material Inspection Form for 5815 Shellmound St.

ACEHS, 1990. Letter to M. Wolski of Sherwin Williams. Re Unreported Release of Hazardous. Materials at 5815 Shellmound, January 26, 1990

ACEHS, 1995. Letter Re. Notice of Requirement to Reimburse local agency for oversight costs for 5813-5815 Shellmound Street, Emeryville, CA 94608.

ACEHS, 1996, Letter from Alameda County Environmental Health Services to F.P. Lathrop re groundwater flow study in Emeryville.

ACEHS, 1996, Letter from ACEHS to F. P. Lathrop re: 5813-5815 Shellmound Street, dated September 20, 1996.

Alameda County, 1994. Alameda County Urban Runoff Clean Water Program, Hazardous Materials Division inspection of Sherwin Williams Facility.

Berkeley, Gleason Business Machines, Flexo Pkg., Sheldon Milligan and Milligan-Spika Corp. Letter re Contamination Sources, December 14, 1994.

Cambria, 1995. Environmental Site Assessment 5813 Shellmound Street, Emeryville, California, March 16, 1995. Volumes 1 and 2.

Cambria, 1995. Letter to Crosby, Heafey, Roach and May with revised tables and figures from May 16, 1995 report.

Cambria, 1996. Investigation Workplan Lathrop Property 5813-5815 Shellmound Street, Emeryville, CA to ACEHS, November 7.

Carquinez Consultants, 1995. Letter from Irville Whittemore re nature of contamination at 5813 Shellmound Street. Draft February 16, 1995.

Croley & Herring v. Fisher Berkeley, 1996. Mediation Conference January 18, 1996, Joint Exhibits.

Crosby et al, 1995. Letters of transmittal of environmental reports for 5813 Shellmound St. property to S. Arigala of the RWQCB, S. Hugo, ACDEH, March 24 and 29, respectively.

Crosby et al, 1994. Letter to C. Browner of U.S. EPA re: Notice of intent to file suit under 7002(a)(2) of RCRA. Lathrop against Fibreboard Corp, Croley & Herring, Fisher-

Crosby et al, 1994. Letter to J. Blake ACDEH, and D. Mishek RWQCB re 5813-15 Shellmound Street. Notifying these agencies that Croley and Herring owners of 5800 Christie Avenue sued F.P. Lathrop and Lathrop Construction and that preliminary invest. by Lathrop indicates releases from Croley plume extend onto Lathrop property.

Friedman and Bruya Sample Analysis Results.

KTW Associates, 1989. Tank Closure Removal, Report and Proposal. 5813-15 Shellmound Street, Emeryville.

Laboratory Reports: 1988 through 1996. Various laboratory reports for soil and groundwater samples at 5813-15 Shellmound.

Sheppard et al, 1995. Letter from S. Melino of Sheppard Mullin Richter and Hampton to J. Wilson of Crosby, Heafey, Roach & May.

Sherwin Williams, 1990. Letter to J. Byrne ACHCS. Encloses Hazardous Waste Manifest from materials spilled following 10/17/89 earthquake.

Woodward-Lundgren & Associates, Soil Investigation Tilt-up Warehouse, Shellmound near Christie Avenue, Emeryville, CA, July 14, 1971.

5800 Christie Avenue (Good Guys Retail)

AWD, 1989. Quarterly Groundwater Monitoring Report, 5800 Christie Avenue, November.

AWD, 1989. Soil Remediation and Closure Report, 5800 Christie Avenue for Croley & Herring Investment. Report describes excavation and ex-situ treatment of VOC containing soil along eastern portion of building.

AWD, 1989. Interim Progress Report, Soil/Groundwater Mitigation & Closure, 5800 Christie Avenue., August 14.

AWD Technologies, 1990, Quarterly Groundwater Monitoring Report, 5800 Christie Avenue., Emeryville, California, March 22.

Environment & Technology Services (ETS), 1991, Soil Vapor Extraction System Closure-Workplan, November 15, 1991.

ETS, 1992, Soil Vapor Extraction System Final Closure Report, 5800 Christie Avenue. August 29, 1992.

ETS, 1993, Quarterly Groundwater Report, 5800 Christie Avenue. Emeryville, CA, May 10.

ETS, 1993, Quarterly Groundwater Report, 5800 Christie Avenue. Emeryville, CA, July 31.

ETS, 1994, Quarterly Groundwater Report, 5800 Christie Avenue. Emeryville, CA, February 7.

ETS, 1995, Quarterly Groundwater Report, 5800 Christie Avenue. Emeryville, CA, February 20.

ETS, 1995, Quarterly Groundwater Report, 5800 Christie Avenue. Emeryville, CA, September 1995.

ETS, 1996, Quarterly Groundwater Report, 5800 Christie Avenue. Emeryville, CA, March 1996.

Gils, 1988. Soil Sampling Survey UST 5800 Christie Avenue. Emeryville, November 15.

Gils, 1988. Soil Sampling Survey 5800 Christie Avenue. Emeryville, November 3.

Gils & Associates, 1988. Asbestos Assessment Survey, 5800 Christie Avenue, Emeryville, CA. October 20.

Bay Bridge Plaza, 5801 Christie Avenue

WCC, 1996. Phase I Environmental Site Assessment, 5801 Christie Avenue, Emeryville, CA prepared for Crosby, Heafey, Roach & May, May 23.

WCC, 1996, Report, Summary and Site Update of Environmental Site Assessment Reports, March 29, 1996.

General Historical Reference

Caltrans, 1990. Historic Architecture Survey Report Part VII.B Sub Area B, Emeryville area San Francisco-Oakland Bay Bridge Vicinity, prepared by Department of Transportation for Caltrans District 4, August.

Oakland Tribune, 1929. Tideland Lease, Parrafine Companies, June 15.

Oakland Tribune, 1937. Emeryville Gateway to Great Bay, by R. Hawley, March 31.

FIGURES

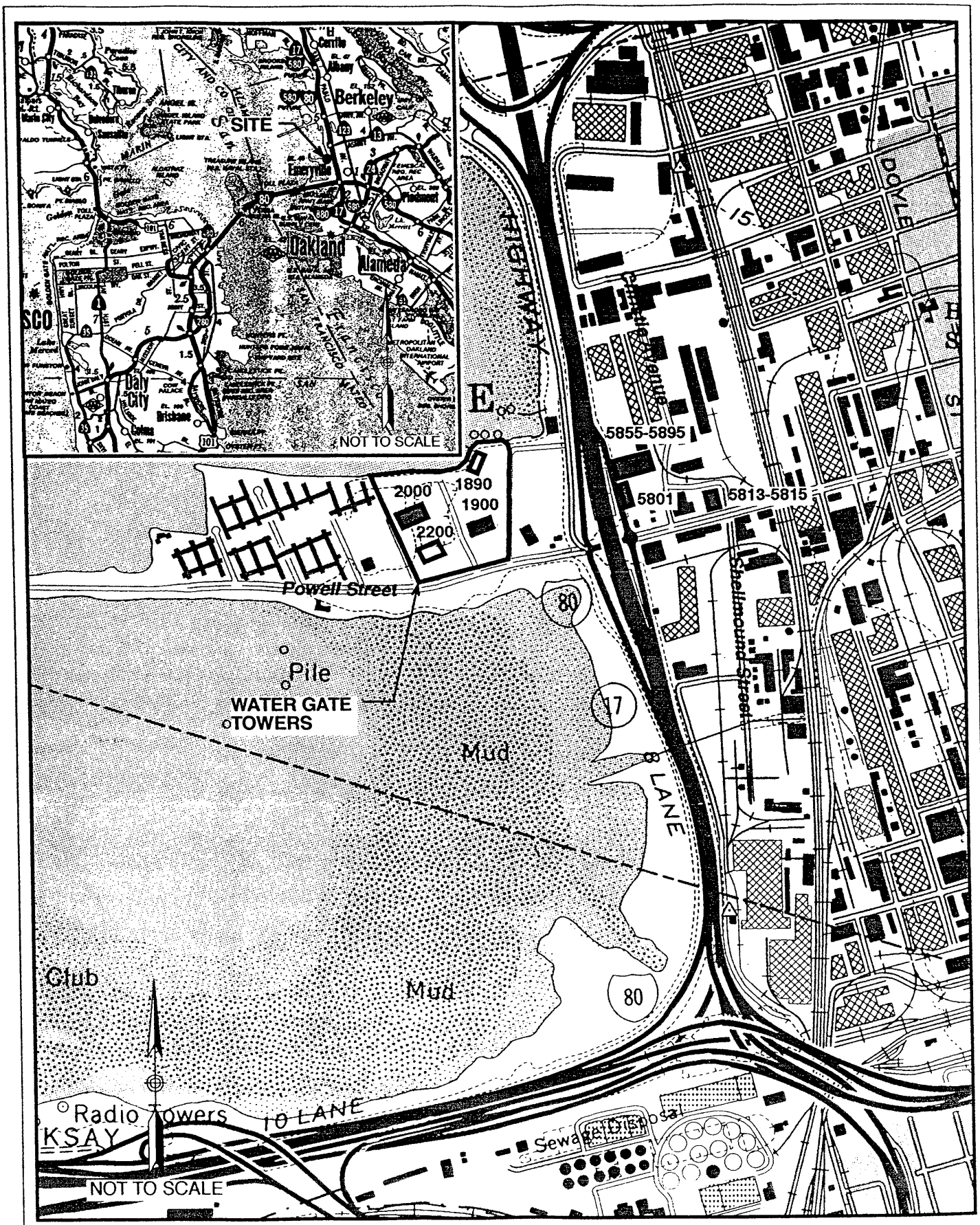


FIGURE 1

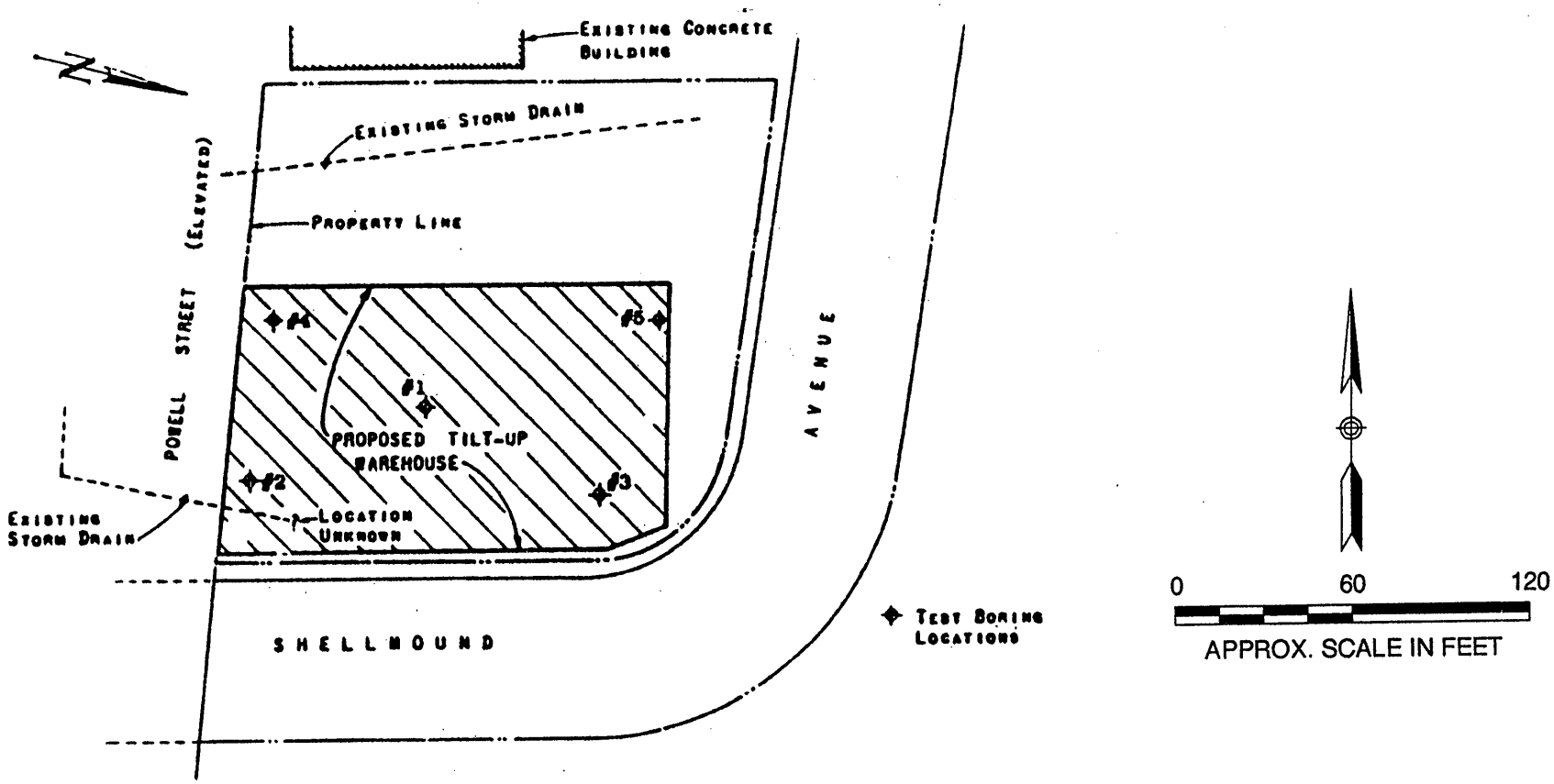
REFERENCE: USGS MAP, OAKLAND WEST QUADRANGLE
1959, PHOTOREVISED 1980.

SITE LOCATION MAP

PROPOSE SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO. 963-7137.500 DRAWING NO. FIG-01 DATE 1/2/97 DRAWN BY DVR

Golder Associates



REFERENCE: WWC, JULY 1996.

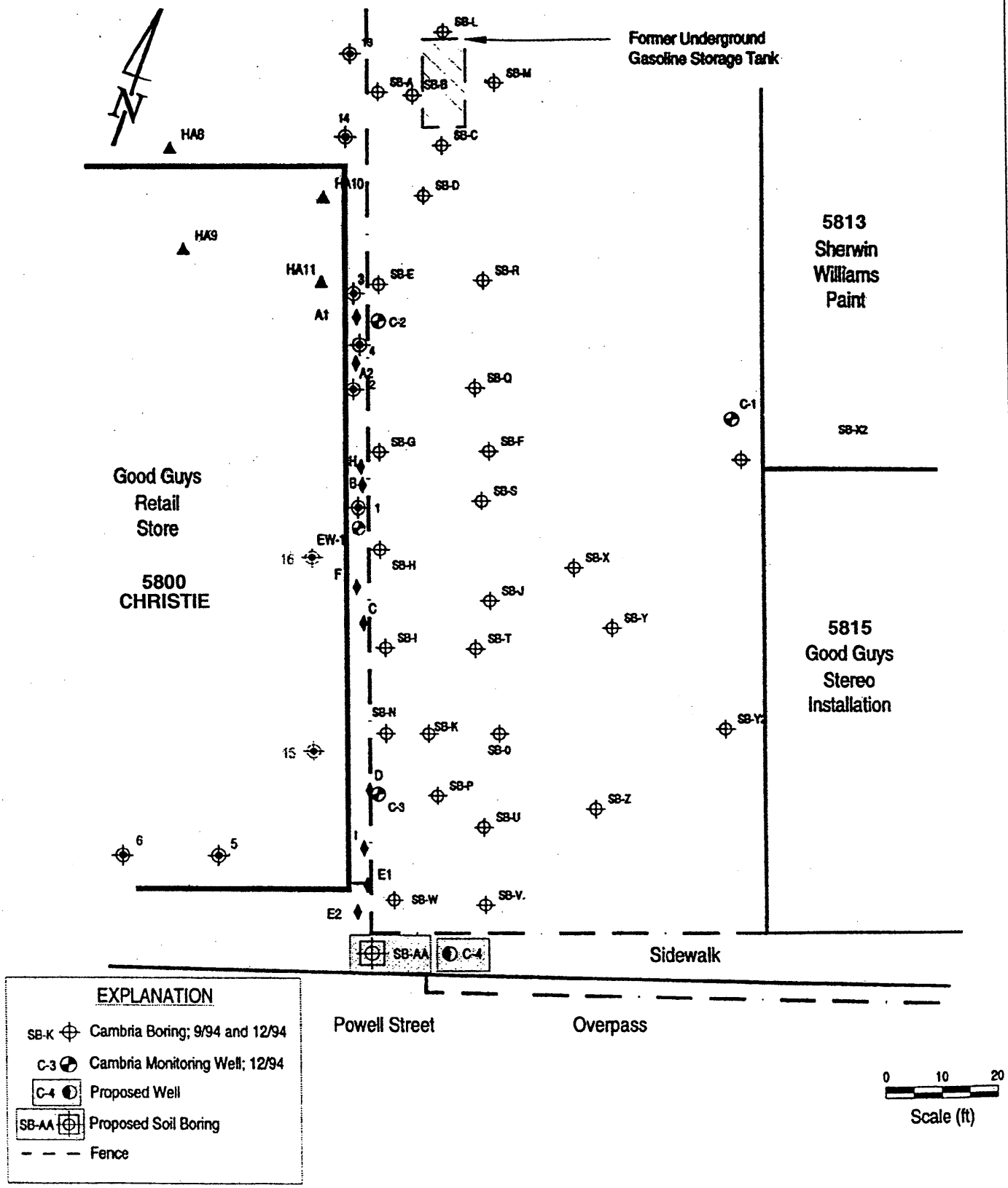
FIGURE **2**

SITE PLAN

5813-5815 SHELLMOUND AVENUE, EMERYVILLE, CA

PROJECT NO. 963-7137.500 DRAWING NO. FIG-02 DATE 1/2/97 DRAWN BY DVR

Golder Associates



REFERENCE: CAMBRIA, NOVEMBER, 1996.

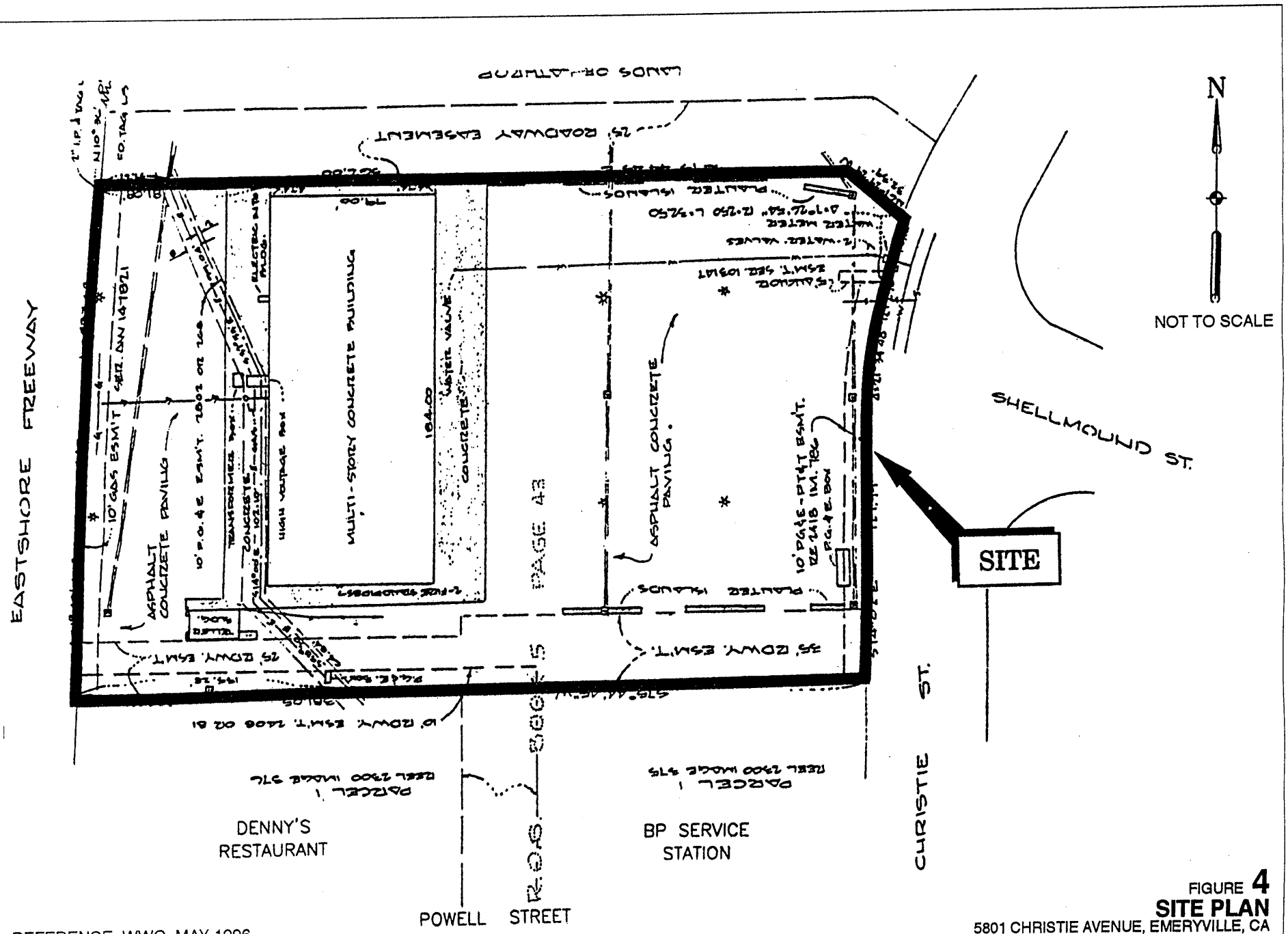
FIGURE **3**

PRIOR AND PROPOSED BORING LOCATIONS

5813-15 SHELLMOUND STREET, EMERYVILLE, CA

PROJECT NO. 963-7137.500 DRAWING NO. FIG-03 DATE 1/2/97 DRAWN BY DVR

Golder Associates



REFERENCE: WWC, MAY 1996.

FIGURE 4
SITE PLAN
5801 CHRISTIE AVENUE, EMERYVILLE, CA

PROJECT NO. 963-7137.500 DRAWING NO. FIG-04 DATE 1/2/97 DRAWN BY DVR

Golder Associates

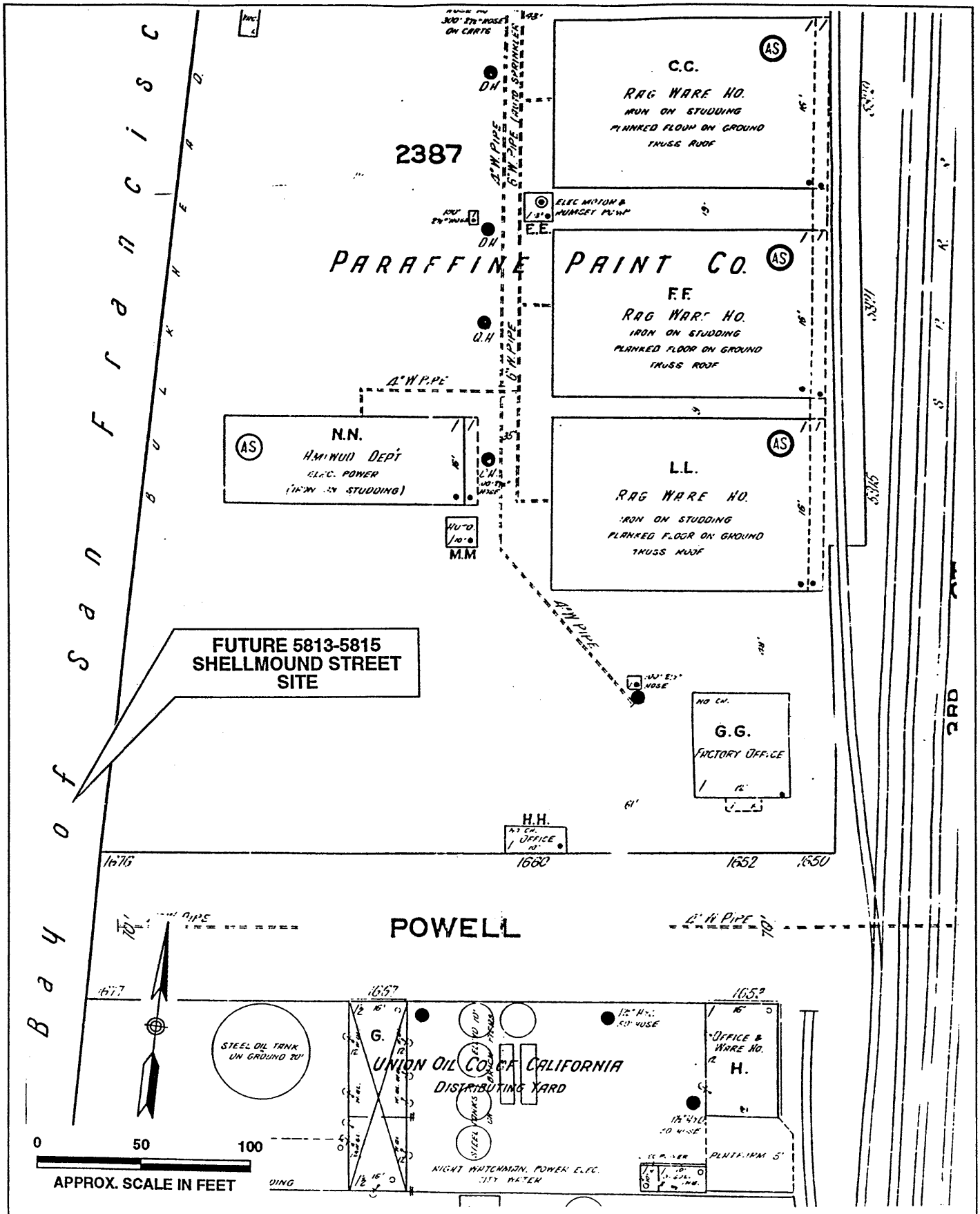


FIGURE **5**

1911 SANBORN MAP

EMERYVILLE, CALIFORNIA

PROJECT NO. 963-7137.500 DRAWING NO. 1911 DATE 1/2/97 DRAWN BY DVR

Golder Associates

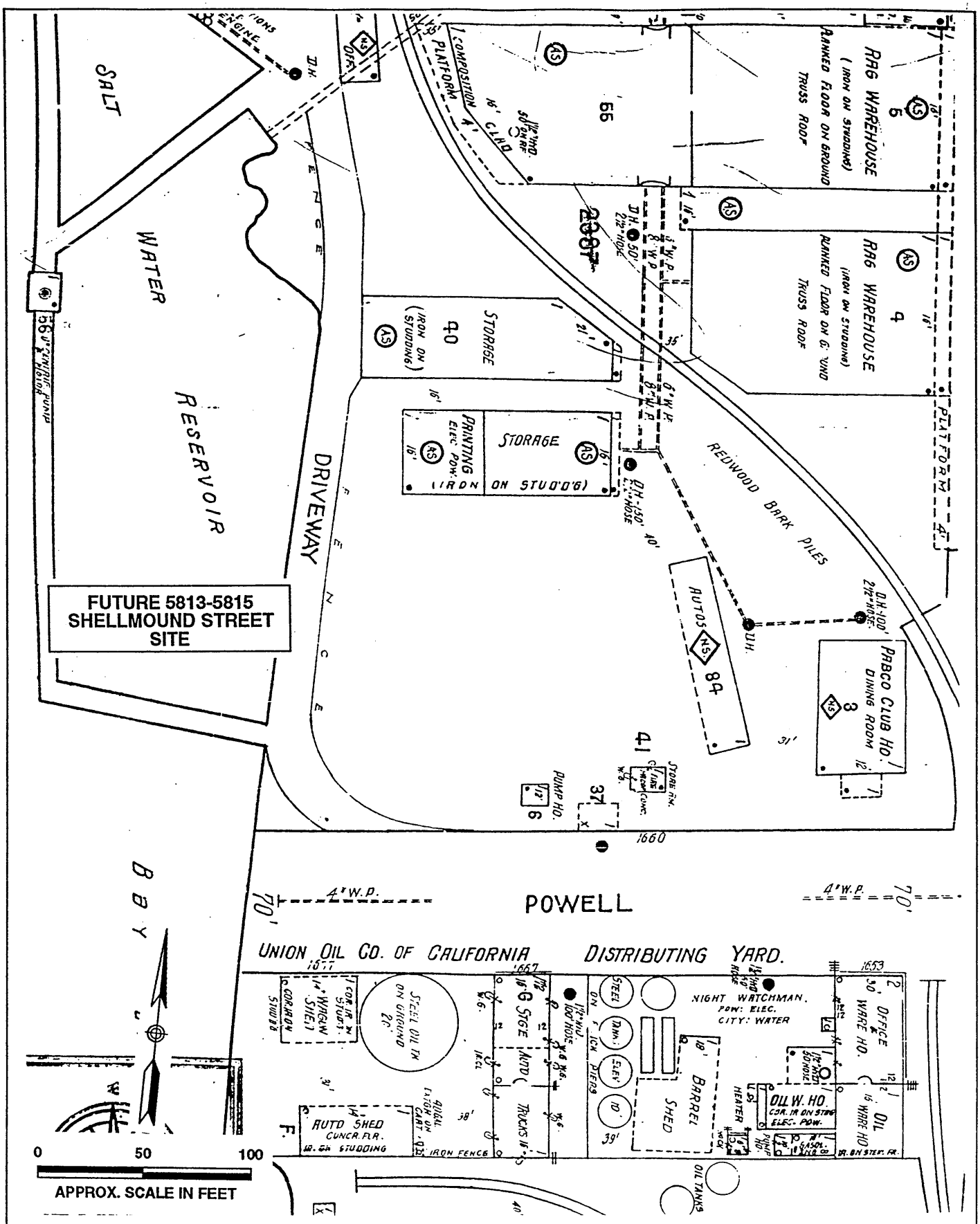


FIGURE **6**

1923 SANBORN MAP

EMERYVILLE, CALIFORNIA

PROJECT NO. 963-7137.500 DRAWING NO. 1923 DATE 1/2/97 DRAWN BY DVR

Golder Associates

APPENDIX A

Asbestos Survey

FOWLER ASSOCIATES

January 16, 1996

Ms. Diane Sarmiento
Golder Associates
1451 Harbor Bay Parkway, Suite 1000
Alameda, CA 94502

RE: Asbestos Survey, Lathrop Buildings

Dear Diane:

The report of the survey conducted at the Lathrop Buildings in Emeryville in November and December 1996 is attached.

Thank you for the opportunity to provide this service for Golder Associates.

Sincerely,

Douglas P. Fowler

Douglas P. Fowler, Ph.D., CIH
Certified Asbestos Consultant #92-0305

DPF:cg
Enclosures

Occupational and Environmental Health Services
Bayport Marina Plaza, 643 Bair Island Road, Suite 305, Redwood City, California 94063
Phone (415) 369-3955 Fax (415) 369-3958

FOWLER ASSOCIATES

Asbestos Survey Report, Lathrop Buildings

A limited facility asbestos survey was conducted on November 8 and December 2 & 3, 1996 in the following six buildings in Emeryville, CA that are the subject of a real estate acquisition by Spieker Properties:

The Bay Bridge Office Plaza, 5801 Christie Avenue
Tower I, 1900 Powell Street
Tower II, 2200 Powell Street
Commercial Building, 5855-5895 Christie Avenue
Sherwin-Williams Store, 5813-5815 Shellmound
Charlie Brown's Restaurant, 1890 Powell

Golder Associates were retained to conduct an environmental assessment of the property and in turn Fowler Associates were retained by Golder Associates to assist with the identification of asbestos containing building materials (ACBM) in the buildings.

At a meeting of representatives of the above parties on November 27, 1996 and subsequent telephone conversations with John Winther, Vice President of Spieker Properties, it was decided that the objective of the asbestos survey would be to identify friable ACBM that by itself and apart from any office space renovations would be a major cost item to abate when necessary or would be a major inhibiter to "above suspended ceiling" maintenance and utility installation work.

This decision narrowed the scope of work to sample and analyze the fire-proofing insulation on the structural steel in Tower II and the thermal systems insulation (TSI) on the chillers, boilers and associated piping located on the roofs of Tower I, Tower II, and the Bay Bridge Office Plaza. This piping does not extend into the floors of the building.

In addition, it was decided to walk through the elevator lobby areas of Tower I to identify presumed asbestos containing materials and to collect samples of wall and ceiling textured finishes. A walk-through without sample collection was conducted in the Sherwin-Williams building and in the Bearing Engineering space in the Commercial building. All of these buildings were the most likely to contain ACBM because of their age i.e. pre 1981 construction.

Walk throughs were not conducted in Tower II, the Bay Bridge Office Plaza, or the four other spaces of the Commercial building. This limitation was based upon the information supplied by Mr. Bob Goldsmith of Goldsmith and Lathrop that extensive interior renovations have been made in those locations since 1986 so ACBM is less likely. However, because of a lack of records or reports as to the extent of asbestos materials removed during the renovations we still must presume that those buildings contain ACBM. This presumption is an acceptable alternative to sampling with the caveat that tenants are notified of the presence of the materials and that analytical tests for the presence of asbestos in the materials is performed

Occupational and Environmental Health Services
Bayport Marina Plaza, 643 Bair Island Road, Suite 305, Redwood City, California 94063
Phone (415) 369-3955 Fax (415) 369-3958

The survey results are presented in separate reports for each building which can be found in Appendix A.

Conclusions

1. The structural steel fireproofing in Tower II does not contain asbestos.

2. Approximately 90% of the pipe insulation on the roof of Tower I contains asbestos. It is in good condition with no signs of exposed or deteriorated insulation.

3. The pipe insulation on the roofs of Tower II and the Bay Bridge Office Plaza are insulated with fiberglass and foam rubber as determined by visual inspection.

4. The surfacing material on the ceiling of the lobby and outdoor deck of Tower I does not contain asbestos.

5. Thermal systems insulation was not found to be present in the Commercial Building, the Sherwin Williams building or Charlie Brown's Restaurant. Air conditioning is provided by roof mounted packaged units.

6. The surfacing materials on the walls in the elevator lobbies of Floors 5 and 6 of Tower I does not contain asbestos.

7. The duct seam tape on the large roof mounted air ducts of Tower I does not contain asbestos.

8. It is presumed, in the absence of removal or analytical records, that interior finish materials in Tower I, Tower II, Bay Bridge Office Plaza, Commercial Building, Sherwin-Williams Building, and Charlie Brown's Restaurant contain asbestos until bulk sampling and testing proves otherwise.

9. All presumed asbestos containing materials observed during the walk-through were in good condition.

10. The findings of this survey should not be a major concern in a property acquisition of this nature. The asbestos containing materials and presumed asbestos containing materials are those commonly found in all buildings of their age. They present a manageable control program.

11. The implementation of an asbestos management program could be less extensive if records of renovations such as specifications, asbestos sample analytical reports, or asbestos removal certifications could be found.

Recommendations

1. Implement and maintain an Operations and Maintenance (O & M) Plan to establish the asbestos management program.

2. Prior to any planned demolition or renovation of building materials test for the presence of asbestos in all materials presumed to contain asbestos per Bay Area Air Quality Management District Regulation 11, Rule 2.

3. Inform tenants and building management employees of the presence of presumed asbestos containing materials (PACM) and asbestos containing materials (ACM) per Cal/OSHA Title 8, Section 1529 (k).

4. Asbestos containing materials must be removed prior to renovation or demolition by a California State Licensing Board (CSLB) asbestos specialty licensed and Cal-OSHA registered asbestos abatement contractor.

5. Obtain certification that ACM has been removed during future renovation projects, notify tenants and building management employees and archive the records in the O & M Plan.

This survey was conducted by the undersigned and Ms. Frances Sooy, a DOSH Certified Site Surveillance Technician, #95-1687.

Please contact our office if you have any questions or require additional information.

Prepared By:

Willson C. Applegate, MS, CIH
Certified Asbestos Consultant #92-0306

Approved By:

Douglas P. Fowler, Ph.D., CIH
Certified Asbestos Consultant #92-0305

WCA:cg

APPENDIX A

SURVEY RESULTS

5801 Christie Avenue - The Bay Bridge Office Plaza, Six Stories, Constructed in 1968

In a meeting with Mr. Robert Goldsmith on December 2, 1996 he confirmed that each floor of this building was completely renovated during an earthquake retrofit project following the 1989 Loma Prieta earthquake. However, there are no records available for review so the extent of removal and replacement of building materials that may have contained asbestos cannot be determined. It is reasonable to assume that new building materials installed during this retrofit project did not contain asbestos; however, materials left in place such as sheetrock wall systems or tile flooring most likely contain asbestos.

In accordance with the objective of this survey it was decided to limit the inspection to the thermal systems insulation housed in the mechanical rooms on the building roof. The boiler, chiller, and fan rooms all contain cold and hot water lines which are insulated with soft fiber glass materials covered with paper or plastic jackets.

The building construction is poured-in-place concrete with no spray applied fire-proofing insulation. The domestic hot water lines in the building are not covered with insulating materials.

It should be presumed in the absence of any previous renovation records, that the interior finish materials such as vinyl floor tile/adhesive, floor sheeting, floor leveling compound, wall texturing compound, ceramic tile grout, baseboard adhesives and ceiling tile contain asbestos until bulk sampling and testing proves this to be untrue.

The survey did not include a walk-through of this building.

1900 Powell Street - Tower I, 12 Stories, Constructed in 1970-1971

This high-rise building is of reinforced concrete frame construction with reinforced concrete floors. The renovation history of this building is unknown except that in recent years entire floors have been renovated for new tenants. However, there are no records available for review so the extent of removal and replacement of building materials that may have contained asbestos cannot be determined. It is reasonable to assume that new building materials installed since 1980 do not contain asbestos; however, materials left in place such as sheetrock wall systems or tile flooring most likely contain asbestos.

In accordance with the objectives of this survey it was decided to limit the inspection and sampling to the thermal systems insulation on the roof of the building and to walk through the floor lobbies and hallways to determine the nature of floors, walls, and ceiling materials and to collect samples of suspect surfacing materials observed.

Thermal System Insulation

The hot and chilled water lines mounted on the roof of the building are insulated with "soft" material which is either fiberglass on black foam rubber and with "hard" material which was sampled and analyzed and contained asbestos. The insulation on the straight runs of both supply and return hot and chilled water piping contain asbestos. These straight runs make up approximately 90% of the piping on the roof. It is estimated that there is at least 500 to 600 feet of piping with ACM insulation.

The chiller has black foam rubber pads on the outside surface. The boiler has no exposed insulation. The domestic hot water lines are not insulated.

Samples were collected from duct taping on the outside of the large air handling ducts mounted on the roof. These samples did not contain asbestos. Table 2 summarizes the Tower I bulk sample results.

Walk Through Observations

The walk through of the lobbies and main hallways on each floor revealed a variety of floor, wall and ceiling materials and finishes none of which appeared to be very old and all of which were in good condition.

Samples were collected of the lobby wall surfacing materials on Floors 5 & 6 and were found not to contain asbestos.

A sample of the sheet vinyl flooring in the 10th floor handicapped women's restroom was found not to contain asbestos. This same flooring was observed in the other handicapped restrooms on other floors.

1900 Powell Street - Tower 1, 12 Stories, Constructed in 1970-1971-(Continued)

Three samples of the ceiling surfacing material on the first floor exterior deck which we describe as a grey scratch and finish coat of stucco were found not to contain asbestos. The indoor ceiling of the lobby is the same homogeneous material as that sampled outdoors.

It should be presumed in the absence of any previous renovation records, that the interior finish materials such as vinyl floor tile/adhesive, floor sheeting, floor leveling compound, wall texturing compound, ceramic tile grout, baseboard adhesives and ceiling tile contain asbestos until bulk sampling and testing proves this to be untrue.

2200 Powell Street - Tower II, 12 Stories, Constructed in 1979-1980

This high-rise building is of steel frame construction with concrete floors on metal deck. According to Mr. Goldsmith many of the floors have been completely renovated since the original construction. However, there are no records available for review so the extent of removal and replacement of building materials that may have contained asbestos cannot be determined. It is reasonable to assume that new building materials installed since 1980 do not contain asbestos; however, materials left in place during renovation such as sheetrock wall systems or tile flooring most likely contain asbestos.

In accordance with the objectives of this survey it was decided to limit the inspection and sampling to the thermal systems insulation on the roof of the building and to the fire-proofing insulation on the structural steel.

The chiller exterior insulation consists of black foam rubber pads.

The boiler exterior walls are all metal plate. If insulation is present it is completely encased within the walls.

The hot and cold water lines, elbows and valve connections on the roof and within the mechanical rooms are insulated with fiberglass materials which are covered with paper, metal, or plastic jackets.

The structural steel fire-proofing insulation was sampled in three (3) locations as representative of the material that was applied at the time of building construction. Samples were collected in the sixth and twelfth floor stair wells and in the chiller room on the roof. Asbestos was not detected in these samples. Table I summarizes these bulk sample results.

The survey did not include a walk-through of this building.

It should be presumed in the absence of any previous renovation records, that the interior finish materials such as vinyl floor tile/adhesive, floor sheeting, floor leveling compound, wall texturing compound, ceramic tile grout, baseboard adhesives and ceiling tile contain asbestos until bulk sampling and testing proves this to be untrue.

5855-5895 Christie Avenue - Commercial Building, Constructed Around 1970

Mr. Goldsmith confirmed that the interior of this building which is constructed with tilt-up concrete slabs and wood frame roof structure was completely renovated in 1986 except for the east end space occupied by Bearing Engineering.

A walk-through of the Bearing Engineering space revealed the following materials that are presumed to contain asbestos:

- Joint tape compound on sheetrock walls in office, sales area and rest room.
- Floor tile/adhesive in offices, sales area, and receiving/shipping (partial).

The other four (4) spaces in the building were not visited; however, in the absence of renovation records to review it must be presumed that any building materials left in place during the 1986 renovation such as those described above contain asbestos until bulk sampling and testing proves this to be untrue.

5813-5815 Shellmound, Sherwin Williams Store, Constructed in 1971

This building is the same tilt-up concrete and wood frame construction as the 5855-5895 Christie building. There was no knowledge of renovation work that has taken place since building construction.

The Sherwin Williams Industrial Paint store occupies two-thirds of the building and a Good Guys shop occupies the back one-third.

The walk-through of the Sherwin Williams space revealed the following materials that are presumed to contain asbestos:

- Joint tape compound on sheetrock walls in offices, sales area, and restrooms.
- Floor tile/adhesive in offices, sales area and restrooms.

The walk-through of the Good Guys shop found the following materials that are presumed to contain asbestos:

- Joint tape compound on sheetrock walls in the customer waiting room and wall texturing on the restroom walls.
- Floor tile/adhesive in the restroom.

The domestic hot water lines in these spaces are not covered with insulation material.

1890 Powell, Charlie Brown's Restaurant

This building is of wood frame construction. The walk-through revealed the following materials that are presumed to contain asbestos:

- Joint tape compound on sheetrock walls through-out the building.
- Ceiling tile.
- Insulation on domestic hot water lines.

SAMPLING RESULTS
Table 1
Tower II, (2200 Powell Street):

SAMPLE NO.	DESCRIPTION	LOCATION	ASBESTOS
SP96.12-02-01	Tan fireproofing material	Stairwell, 12th floor	None Detected
SP96.12-02-02	Tan fireproofing material	Roof, mechanical room	None Detected
SP96.12-02-03	Tan fireproofing material	Stairwell, 6th floor	None Detected

Table 2
Tower I (1900 Powell Street):

SAMPLE NO.	DESCRIPTION	LOCATION	ASBESTOS
SP96.12-02-04	Tan duct joint tape with painted surface	Old exhaust duct, roof	None Detected
SP96.12-02-05	Off white duct joint tape	Adjacent to old exhaust, roof	None Detected
SP96.12-02-06	off white and black pipe insulation with dark grey painted surface	Roof, chilled water supply	None Detected
SP96.12-02-07	Off white pipe insulation	Roof, hot water line (east)	30% chrysotile asbestos
SP96.12-02-08	Off white pipe insulation	Roof, cold water line (east)	15% chrysotile asbestos
SP96.12-02-09	Off white pipe insulation	Roof, cold water line (west)	15% chrysotile asbestos
SP96.12-02-10	Pipe insulation, black exterior and brown interior	Roof, hot water line (west)	None Detected
SP96.12-02-11	Off white wall texture and joint compound	Lobby wall, 6th floor adjacent to women's room	1% chrysotile * asbestos
SP96.12-02-12	Off white wall texture	Lobby wall, 5th floor adjacent to women's room	None Detected
SP96.12-03-01	Off white wall texture	Lobby wall, 5th floor (north side)	None Detected
SP96.12-03-02	Off white wall texture	Lobby wall, 6th floor (north side)	None Detected

* The sample included wall joint compound thus the asbestos detected is assumed to be in the joint compound.

Table 2 (cont'd)
Tower 1, (1900 Powell Street):

SAMPLE NO.	DESCRIPTION	LOCATION	ASBESTOS
SP96.12-03-03	Tan and white speckled floor sheeting	Women's handicapped restroom floor, 10th floor	None Detected
SP96.12-03-04	Stucco, grey scratch coat and finish coat	East exterior awning	None Detected
SP96.12-03-05	Stucco, grey scratch coat and finish coat	East exterior awning	None Detected
SP96.12-03-06	Stucco, grey scratch coat and finish coat	East exterior awning	None Detected
SP96.12-03-07	Off white wall texture	Lobby wall 5th floor (south side)	None Detected

APPENDIX B

PROTOCOL

SAMPLING PROTOCOL

BULK SAMPLING OF SUSPECT MATERIAL

Nineteen (19) bulk samples of suspect building materials were obtained from Tower 1 (1900 Powell St.) and Tower 2 (2200 Powell St.). Details of materials sampled by Fowler Associates, locations and sample results can be found in the tables below segregated by building address. Copies of the laboratory report is included in Appendix C.

SAMPLING METHODS

Samples of the suspect accessible asbestos containing materials (ACM) were obtained using wet methods, placed in clean plastic containers, and submitted to the laboratory for analysis.

The samples were analyzed by the RJ Lee Group Laboratory in San Leandro, California. The RJ Lee Group is accredited by the California Department of Health Services (DOHS), the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA). It is a participant in the National Institute for Occupational Safety and Health (NIOSH) Proficiency Analytical Testing Program and has substantial experience in the analysis of asbestos.

The bulk samples collected during the survey were analyzed by polarized light microscopy (PLM) which is the method mandated by the US Environmental Protection Agency (EPA). This analytical method cannot reliably detect asbestos concentrations of less than one percent. Therefore, some samples will be reported as containing "less than one percent/none detected or as less than 1% trace" to be consistent with the limitations of the analytical method.

In addition, the PLM method is insensitive to very small asbestos fibers because of the optical characteristics of the microscope used. It is conceivable that PLM results may either understate the actual concentration(s) of asbestos, or that asbestos may exist in samples for which the lab reported "none detected."

We therefore recommend the following interpretation of PLM results.

- Concentration greater than 1% - contains asbestos and is subject to all asbestos-related regulations.

- Less than 1% (trace) concentration found - not generally subject to hazardous waste disposal regulations or Bay Area Quality Management District Regulations (BAAQMD), but is subject to OSHA (Cal/OSHA) regulations since it must be presumed that the actual concentrations were above the 0.1% "trigger" for those regulations unless further analysis is performed by transmission electron microscopy (TEM).

- Less than 1% none detected - no need for concern unless the suspect material is one in which asbestos is more likely than not (e.g. 9" x 9" floor tiles).

- If conflicts exist between sample results for the same or similar materials [that is, some samples are positive and some negative (no asbestos detected)] - assume that asbestos is present, since "false negatives" are much more likely than "false positives."

Final resolution of presence or absence of asbestos can be accomplished by Transmission Electron Microscopy (TEM) analysis at a cost of approximately $500.00 per sample, however, we do not see the need to perform the additional analysis on any of the samples obtained at this project site.

REMARKS

BAAQMD requires that buildings be thoroughly surveyed for the presence of regulated asbestos containing materials (RACM) prior to planned demolition or renovation of a building. RACM is defined as:

> **Friable ACM** - any material containing more than one percent asbestos that when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, such as thermal systems insulation, sprayed or troweled on fireproofing, acoustical ceiling material and ceiling tiles, linoleum and linoleum backing, non-asphalt-saturated roofing felts, asbestos containing paper and joint compound, or;
>
> **Category I nonfriable ACM** - any material containing more than one percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure, that has or will become friable, or that will be or has been subjected to sanding, grinding, cutting, or abrading, such as asbestos containing packings, gaskets, resilient floor coverings and asphalt roofing products, or;
>
> **Category II nonfriable ACM** - non Category I ACM, such as "transite" board or pipe and other asbestos cement products, plaster, stucco, paint and mastics that have a high probability of becoming crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation.

APPENDIX C

LABORATORY RESULTS

RJ LeeGroup, Inc.
530 McCormick Street • San Leandro, CA 94710
(510) 567-0480 • FAX (510) 567-0488

December 3, 1996

Dr. Doug Fowler
Fowler Associates
643 Bair Island Rd, Suite 305
Redwood City, CA 94063

RE: PLM Standard Asbestos Analysis Results for Samples as Shown on Test Report
RJLeeGroup, Inc. Job No.: AOC612023
Client P.O./Job Number: 802004
Client Job Name/Location: Properties Spieker, TWR1 & TWR 2

Dear Dr. Fowler:

Enclosed are the results from the polarized light microscopy (PLM) asbestos analysis of the above referenced sample(s). Sample(s) were analyzed in accordance with guidelines set forth in the EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples, 40 CFR, Pt. 763, Subpt. F, App. A (7-1-87) (EPA 600/M4-82-020).

Test Report lists each sample identification number, gross sample description, sample location, type(s) and concentration of asbestos, type(s) and concentration of nonasbestos fibers, major components and concentration of nonfibrous material (NFM), sample run date, analyst, sample homogeneity, and a layer breakdown if applicable. All concentrations are given in area percents (visual estimation).

RJ Lee Group, Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) (NVLAP Participant Number 1208-2) for bulk asbestos fiber analysis (PLM), and by the California Department of Health Services, Environmental Laboratory Accreditation Program (CALELAP) for bulk asbestos analysis. Neither the NVLAP Accreditation of this laboratory nor this report may be used to claim product endorsement by NVLAP or any agency of the United States government.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the sample(s) covered by this report, RJ Lee Group will store the sample(s) for a period of ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample(s).

If you have any questions on this report or if RJ Lee Group, Inc. can be of further assistance, please do not hesitate to call.

Sincerely,

Stephen S. Yata
Geologist

SSY/atg
Enclosure

Test Report - Fowler Associates

Polarized Light Analysis Results

Project AOC612023

Sample Number / Sample Appearance	Client Sample Number	Asbestos: Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Nonasbestos: Mineral Wool	Fibrous Glass	Synthetic Fibers	Other Fibers	NonFibrous Material	Run Date / Analyst
1624875CPL Tan fire proofing	01	-	-	-	-	-	-	5 % NFM: Qtz, Opaq, Gyp, Mica, Misc. Part.	-	-	-	-	95 % Homogeneous	12/3/96 SSY
1624876CPL Tan fire proofing	02	-	-	-	-	-	-	5 % NFM: Qtz, Opaq, Gyp, Mica, Misc. Part.	-	-	-	-	95 % Homogeneous	12/3/96 SSY
1624877CPL Tan fire proofing	03	-	-	-	-	-	-	5 % NFM: Qtz, Opaq, Gyp, Mica, Misc. Part.	-	-	-	-	95 % Homogeneous	12/3/96 SSY
1624878CPL Tan duct joint	04	-	-	-	-	-	-	12 % NFM: Qtz, Carb, Binder, Opaq, Gyp, Misc. Part.	-	-	-	-	88 % Non Homogeneous	12/3/96 SSY
1624879CPL Off-white duct joint	05	-	-	-	-	-	-	40 % NFM: Qtz, Carb, Binder, Opaq, Misc. Part.	-	-	-	-	60 % Homogeneous	12/3/96 SSY
1624880CPL Off-white and black plaster	06	-	-	-	-	-	-	2 % NFM: Qtz, Tar, Carb, Binder, Opaq, Misc. Part.	-	5 %	-	-	93 % Homogeneous	12/3/96 SSY

Samples received on: Monday, December 2, 1996

Authorized Signature _____
Stephen S. Yata, Geologist

Date Tuesday, December 3, 1996

RJ Lee Group, Inc.
Bay Area Lab

530 McCormick Street
San Leandro, CA 94577

Phone (510) 567-0480
Fax (510) 567-0488

Test Report - Fowler Associates

Polarized Light Analysis Results

Project AOC612023

Sample Number / Sample Appearance	Client Sample Number	Asbestos: Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Mineral Wool	Nonasbestos: Fibrous Glass	Synthetic Fibers	Other Fibers	NonFibrous Material	Run Date / Analyst
1624881CPL Off-white plaster	07	30 %	-	-	-	-	-	<1 %	-	-	-	-	70 % Homogeneous	12/3/96 SSY
						NFM: Qtz, Carb, Opaq, Gyp, Misc. Part.								
1624882CPL Off-white plaster	08	15 %	-	-	-	-	-	<1 %	-	-	-	-	85 % Homogeneous	12/3/96 SSY
						NFM: Qtz, Carb, Opaq, Gyp, Misc. Part.								
1624883CPL Off-white plaster	09	15 %	-	-	-	-	-	<1 %	-	-	-	-	85 % Homogeneous	12/3/96 SSY
						NFM: Qtz, Carb, Opaq, Gyp, Misc. Part.								
1624884CPL Brown and black - black outside jacket- plaster	10	-	-	-	-	-	-	<1 %	-	1 %	-	-	99 % Homogeneous	12/3/96 SSY
						NFM: Qtz, Carb, Binder, Opaq, Misc. Part.								
1624885CPL Off-white wall texture	11	1 %	-	-	-	-	-	<1 %	<1 %	-	-	-	99 % Homogeneous	12/3/96 SSY
						NFM: Qtz, Carb, Opaq, Misc. Part.								
1624886CPL Off-white wall texture	12	-	-	-	-	-	-	<1 %	<1 %	-	-	-	99+ % Homogeneous	12/3/96 SSY
						NFM: Qtz, Carb, Opaq, Misc. Part.								

Samples received on: Monday, December 2, 1996

Authorized Signature _____
Stephen S. Yata, Geologist

Date Tuesday, December 3, 1996

RJ Lee Group, Inc.
Bay Area Lab

530 McCormick Street
San Leandro, CA 94577

Phone (510) 567-0480
Fax (510) 567-0488

RJ Lee Group, Inc.

530 McCormick Street• San Leandro, CA 94577
(510) 567-0480 • FAX (510) 567-0488

December 3, 1996

Dr. Doug Fowler
Fowler Associates
643 Bair Island Rd, Suite 305
Redwood City, CA 94063

RE: PLM Standard Asbestos Analysis Results for Samples as Shown on Test Report
RJLeeGroup, Inc. Job No.: AOC612041
Client P.O./Job Number: 802-005
Client Job Name/Location: Golder/Speiker Survey TWRI

Dear Dr. Fowler:

Enclosed are the results from the polarized light microscopy (PLM) asbestos analysis of the above referenced sample(s). Sample(s) were analyzed in accordance with guidelines set forth in the EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA-600/R-93/116).

Test Report lists each sample identification number, gross sample description, sample location, type(s) and concentration of asbestos, type(s) and concentration of nonasbestos fibers, major components and concentration of nonfibrous material (NFM), sample run date, analyst, sample homogeneity, and a layer breakdown if applicable. All concentrations are given in area percents (visual estimation).

RJ Lee Group, Inc. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) (NVLAP Participant Number 1208-2) for bulk asbestos fiber analysis (PLM), and by the California Department of Health Services, Environmental Laboratory Accreditation Program (CALELAP) for bulk asbestos analysis. Neither the NVLAP Accreditation of this laboratory nor this report may be used to claim product endorsement by NVLAP or any agency of the United States government.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the sample(s) covered by this report, RJ Lee Group will store the sample(s) for a period of ninety (90) days before discarding. A shipping and handling fee will be assessed for the return of any sample(s).

If you have any questions on this report or if RJ Lee Group, Inc. can be of further assistance, please do not hesitate to call.

Sincerely,

Scott Stoller
Geologist

SS/atg
Enclosure

Test Report - Fowler Associates

Polarized Light Analysis Results

Project AOC612041

Sample Number / Sample Appearance	Client Sample Number	Asbestos: Chrysotile	Amosite	Crocidolite	Anthophyllite	Tremolite	Actinolite	Cellulose	Nonasbestos: Mineral Wool	Fibrous Glass	Synthetic Fibers	Other Fibers	NonFibrous Material	Run Date / Analyst
1624891CPL	SP 96-12-03-01	-	-	-	-	-	-	1 %	-	-	-	-	99 %	12/3/96
Off-white wall texture						NFM: Qtz, Carb, Opaq, Mica, Misc. Part.								SS
														Homogeneous
1624892CPL	SP 96-12-03-02	-	-	-	-	-	-	1 %	-	-	-	-	99 %	12/3/96
Off-white wall texture						NFM: Qtz, Carb, Opaq, Mica, Misc. Part.								SS
														Homogeneous
1624893CPL	SP 96-12-03-03	-	-	-	-	-	-	20 %	-	-	-	-	80 %	12/3/96
Tan and white speckled floor sheeting (no adhesive)						NFM: Qtz, Carb, Binder, Opaq, Misc. Part.								SS
														Homogeneous
1624894CPL	SP 96-12-03-04	-	-	-	-	-	-	<1 %	-	-	-	-	99+ %	12/3/96
Grey scratch finish coat						NFM: Qtz, Carb, Opaq, Mica, Misc. Part.								SS
														Homogeneous
1624895CPL	SP 96-12-03-05	-	-	-	-	-	-	<1 %	-	-	-	-	99+ %	12/3/96
Grey scratch finish coat						NFM: Qtz, Carb, Opaq, Mica, Misc. Part.								SS
														Homogeneous
1624896CPL	SP 96-12-03-06	-	-	-	-	-	-	<1 %	-	-	-	-	99+ %	12/3/96
Grey scratch finish coat						NFM: Qtz, Carb, Opaq, Mica, Misc. Part.								SS
														Homogeneous
1624897CPL	SP 96-12-03-07	-	-	-	-	-	-	<1 %	-	-	-	-	99+ %	12/3/96
Off-white wall texture						NFM: Qtz, Carb, Opaq, Misc. Part.								SS
														Homogeneous

Samples received on: Tuesday, December 3, 1996

Authorized Signature _____
Scott Stotler, Geologist
Date Tuesday, December 3, 1996

RJ Lee Group, Inc.
Bay Area Lab

530 McCormick Street
San Leandro, CA 94577

Phone (510) 567-0480
Fax (510) 567-0488

APPENDIX B

5813-5815 Shellmound Street Data
Photographs, UST Removal Report
Borehole Logs
and
Chemical Analysis Data

5813-5815 Shellmound Street Data
Photographs

1. View south toward Powell Street.

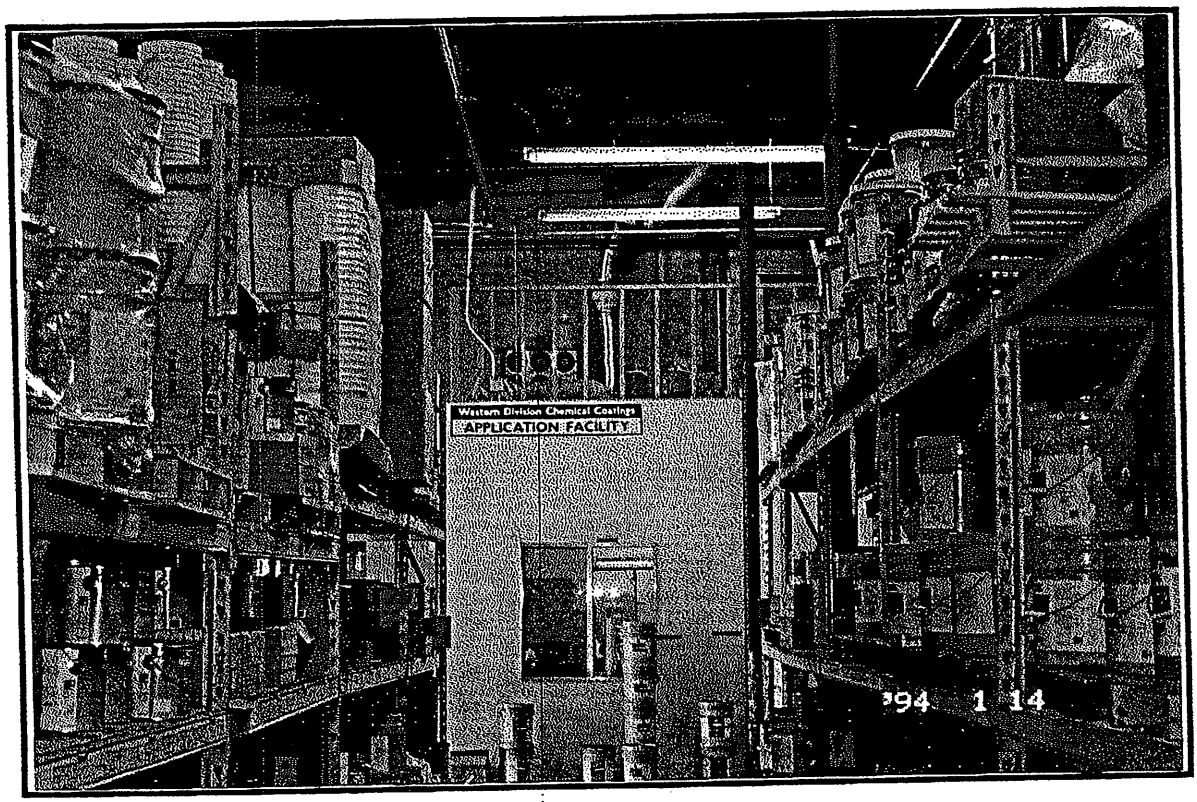
2. View south of entrance to Sherwin Williams Professional and Industrial Sales

SITE PHOTOGRAPHS

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates



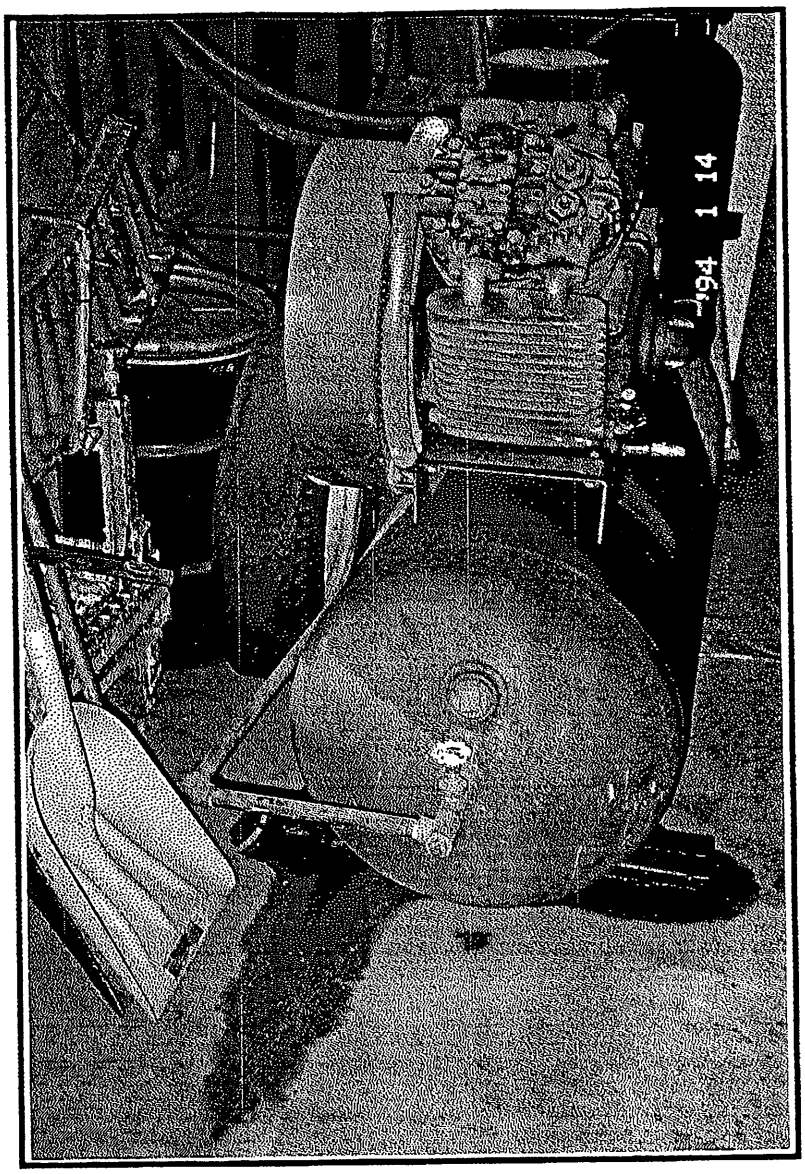
3. View south in southern portion of the building. This area is used as warehouse for industrial and commercial paint products. Note that paint pails could fall off shelving in a significant earthquake similar to the spill that occurred during the 1989 Loma Prieta Earthquake. The enclosed room at rear is used for quality control testing.

SITE PHOTOGRAPH

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates



4. Air compressor in the southeast corner of the building. Stain is oil. Shovel is part of spill prevention equipment that includes absorbent materials (not shown).

SITE PHOTOGRAPH

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates

5. View of refuse container outside of northeast corner of building. Note paint spills on side of container. The area is covered with gravel.

SITE PHOTOGRAPH

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates

5813-5815 Shellmound Street

UST Removal Report

GOLDSMITH-LATHROP

Tank Closure Report

C-2804

K.T.W. & ASSOCIATES
43289 Osgood Road, Fremont, Calif. 94539
(415) 623-0480
Cal. State Cont. Lic. # 572427

November 15, 1989

Tom Sheehan
Goldsmith-Lathrop
2000 Powell Street, Suite 1660
Emeryville, CA 94608

Dear Tom:

K.T.W. & Associates is pleased to submit this report describing closure activities associated with removal of one 2,000 gallon underground fuel tank located in Emeryville, California. This report provides a description of site activities and observations, the condition of excavated tanks, the condition of tank backfill and other subsurface materials, sampling procedures and locations, laboratory analytical procedures and certified analytical results, chain of custody documentation, and hazardous waste manifest.

Site Description

The site is located at 5813-15 Shellmound in Emeryville, California. A site location map is presented in Plate 1, Attachment A. One 2,000 gallon underground gasoline tank was formerly located at the subject site. A site map showing the location of the site structure, former underground tank and dispensing island is presented in Plate 2.

Closure Plan and Permitting

A closure plan and permit application for removal of underground tanks was completed and submitted to the Alameda County Health Care Services Agency (ACHCSA), and the City of Emeryville Fire Department (EFD). Closure activities proceeded under ACHCSA permit No. U552924, and EFD permit # 1126.

Underground Tank Closure

Tank removal activities occurred on October 26, 1989. Inspector Dennis Byrne of the ACHCSA was present to observe the tank removal and sampling activities. Construction services associated with closure were performed by K.T.W. & Associates. A K.T.W. & Associates California Registered Geologist provided environmental sampling and documentation services.

Closure activities were documented in the Record of Fire Inspection prepared by Dennis Byrne. Upon removal the structural integrity of the one 2,000 gallon tank was observed to be sound. The tank was wrapped, and was observed to contain no corrosion pits. The tank was removed and transported from the site by a permitted hazardous waste transporter under hazardous waste manifest. Copies of the hazardous waste manifest are presented in Attachment A.

General Observations, Underground Tank Closure

The tank, which had been used to store gasoline prior to it's removal, contained no trim other than a riser assembly for filling, a product line and a vent line.

The condition of the lines prior to removal were sound, with no loss of wrapping which would indicate exposure to gasoline. All the fittings were properly installed and were sealed with "pipe dope" at any threaded connections. The riser assemblies that constituted the fill pipe for the tank was sound and free of defects. Some hydrocarbon odor was observed

while removing the overburden, and the overburden material contained some discoloration. The backfill material consisted of sand, and was of the correct depth below and surrounding the tank and lines.

The thoroughly sound condition of the gasoline tank and lines upon removal indicate that the risk of a leak was negligible.

Soil Sampling

Two soil samples were collected from the gasoline tank excavation and one composite soil sample was collected from the stockpiled material. Soil sampling of the tank occurred on October 26, 1989. The sample was obtained by excavating to the native soil/interface and driving a brass tube into the native soil.

Samples were collected in brass tubes, sealed in teflon and plastic caps, and promptly stored in a cooler. Following completion of field work, samples were submitted to Anametrix Laboratory, San Jose, CA (DPHS #151) certified analytical laboratory for analyses under appropriate chain of custody protocol.

Two (2) soil samples were taken from the tank excavation. There locations are noted in Plate 2. The samples were taken in the northeast (#1512) and south east (#1521) corners of the excavation, immediately above the level of water that had entered the hole from a ruptured sewer line in the vicinity of the excavation. The samples taken from the infiltrated water by the East Bay Municipal Utilities District (EBMUD), showed that it was not groundwater, but contained nitrates and coliforms consistent with sewer water. At the direction of ACHCSA, K.T.W. & Associates took a sample for TPH-G, BTX & E analysis (#1500). The results from that analysis are contained in Attachment B.

Additionally, a composite sample # 1532 was taken from the stockpile to confirm that the excavated material could be transported to a class III landfill. (A fuel odor was noted in the stockpiled material.)

Certified Analytical Results

Samples collected for minimum verification analyses (MVA) were analyzed in accordance with appropriate regulatory guidelines contained within Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks (RWQCB, 1988). Copies of soil analytical results are presented in Attachment B.

MVA for Underground Fuel Tank Excavation

The soil samples collected from the fill-natural materials interface below the fuel tank contained non-detectable (ND) concentrations of the constituents sought. The laboratory results are summarized in Attachment C.

Regulatory Guidelines

The RWQCB - San Francisco Bay Region has established a level of 100 ppm TPH concentrations in soil as a general decision value for requiring further definition of site soil and groundwater contamination where shallow groundwater conditions are known to exist. The origin of the 100 ppm level was to "develop a method to prioritize the case load and indicate whether a significant volume of fuel had been released or discharged" (RWQCB, June, 1988).

Copies of this report should be submitted to:

Regional Water Quality Control Board
1111 Jackson Street, Rm. 6000
Oakland, CA 94607
Attn: Dyan Whyte

Additional copies of this report have been provided for the purpose of regulatory submittal.

Should you have any questions or comments regarding the evaluations presented in this report, please call.

Respectfully,

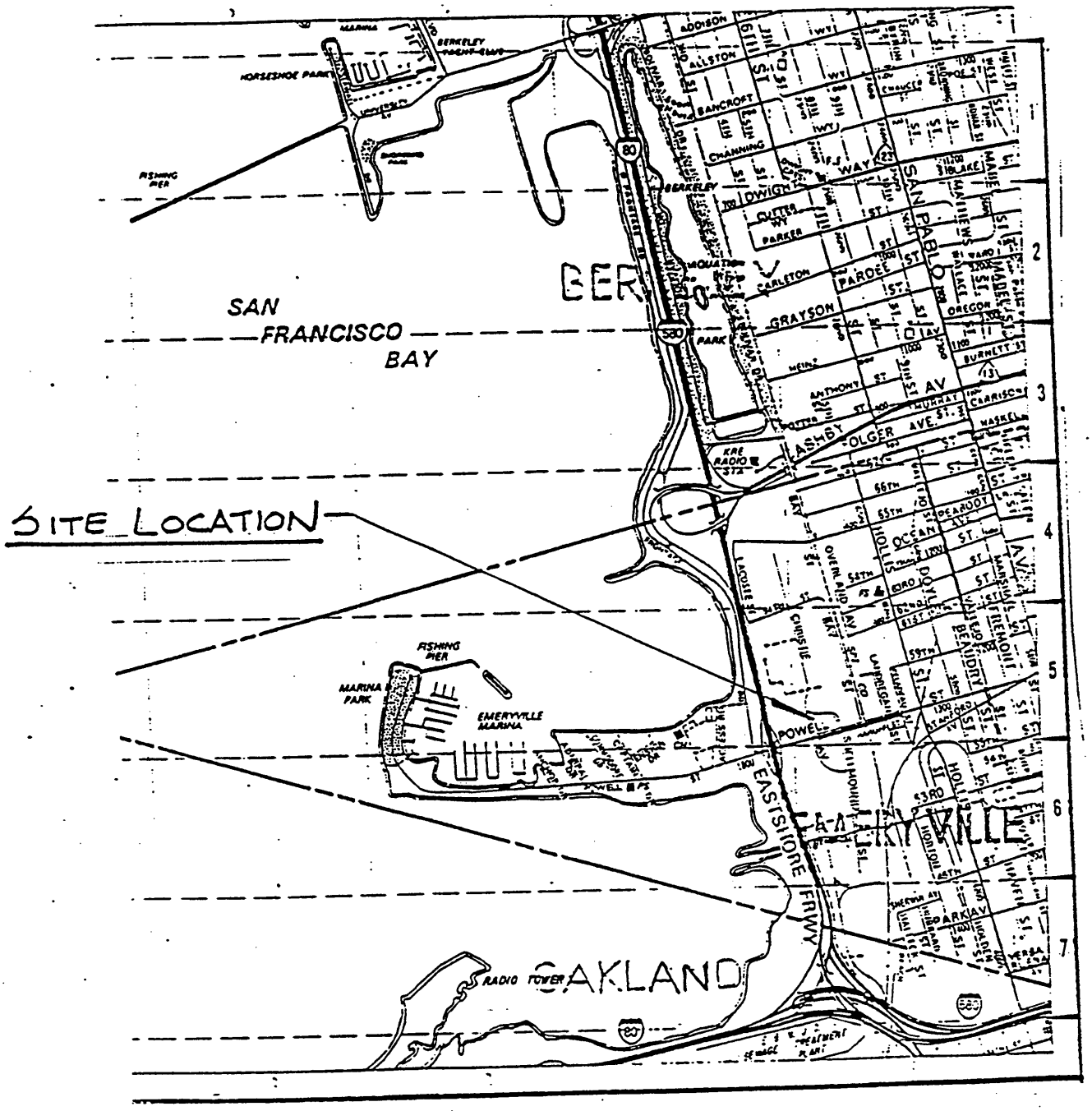
K. W. Krause

Kevin Krause
Vice President

KK/cls

Attachments

PLATES



C-2811

SCALE

DATE 11-16-8

DRWD. M.K.

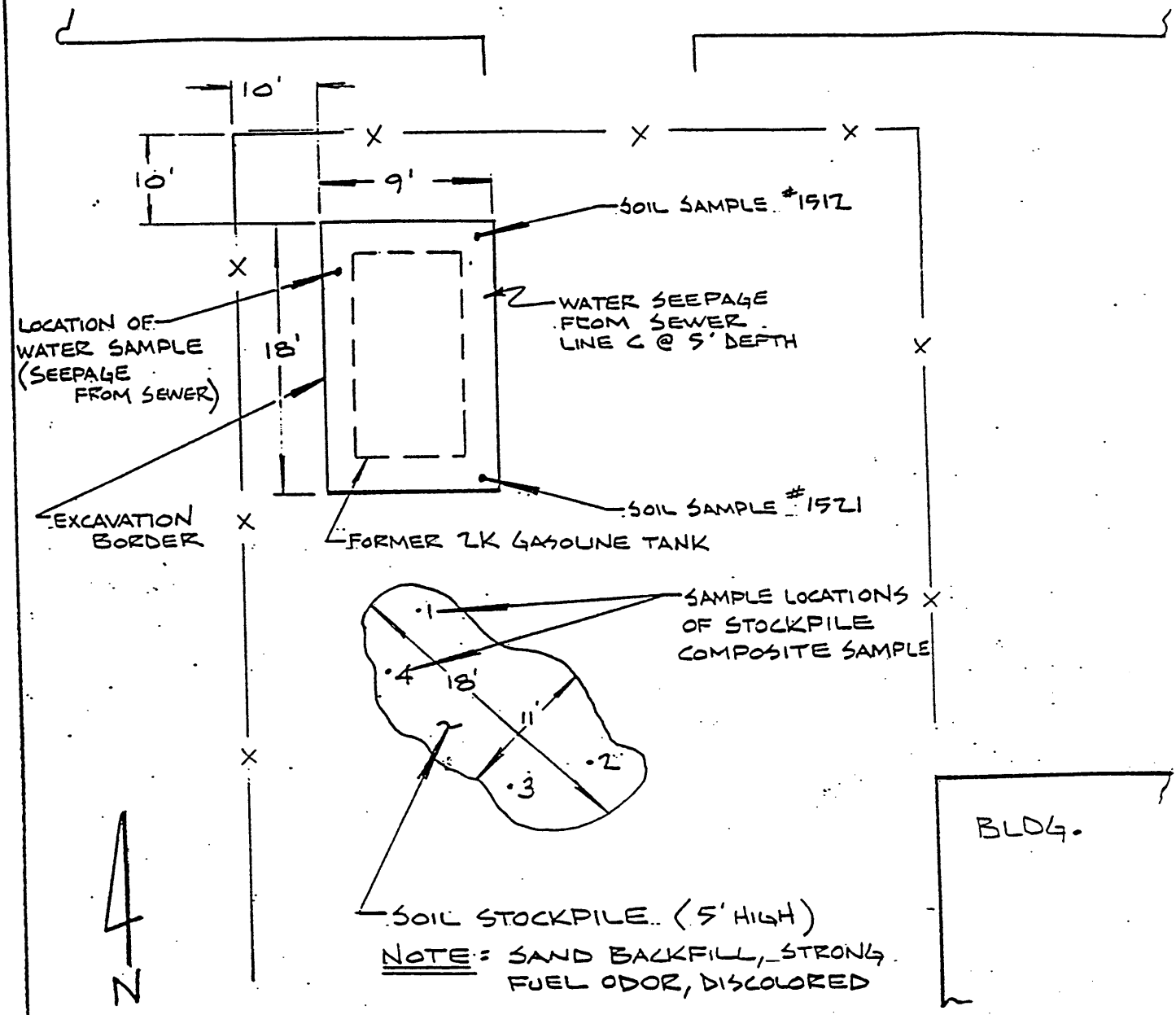
KTN & ASSOCIATES

GENERALIZED SITE PLAN

GOLDSMITH ~ LATHROP
5813-19 SHELLMOUND
EMERYVILLE, CA.

PROJECT NO.

PLATE 1



C-2812

NOTE = WATER RUNNING INTO EXCAVATION @ MID-LEVEL OF TANK ON N.E. SIDE OF EXCAVATION WALL CITY CONFIRMS SEWER WASTE (NITRATES) GROUND WATER NOT ENCOUNTERED

SCALE: NONE
DATE: 11-15-88
DRWG.#: MK

KTW & ASSOCIATES
43289 Osgood Road, Fremont, Calif. 94539
(415) 623-0480
Cal. State Cont. Lic. # 572427

PROJECT NO.

GENERALIZED SITE PLAN
GOLDSMITH & LATHROP
5813-15 SHELLMOUND
EMERYVILLE, CA.

PLAT 2

ATTACHMENT A

Hazardous Waste Manifests

Form Approved OMB No. 2050—0039 (Expires 9-30-91)
Please print or type. *(Form designed for use on elite (12-pitch typewriter).*

Department of Health Services
Toxic Substances Control Division
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number: 88119329

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.					State / EPA/Other
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above
a. 01 b. c. d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

C-2814

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

8022 A (1/88)
8700—22
9-88) Previous editions are obsolete.

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

ATTACHMENT B

Certified Analytical Reports

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : TOM GREGORY 102689-1500
Matrix : WATER
Date sampled : 10/26/89
Date anl.TPHg: 10/27/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8910234-01
Analyst : CG
Supervisor : TC
Date released : 10/30/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
71-43-2	Benzene	2	32
108-88-3	Toluene	2	240
100-41-4	Ethylbenzene	2	61
1330-20-7	Total Xylenes	4	~~400~~
	TPH as Gasoline	100	2800

ND - Below reporting limit.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

C-2816

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: ~~TOM GREGORY~~ 102689-1512	Anametrix I.D.	: 8910234-02
Matrix	: SOIL	Analyst	: CB
Date sampled	: 10/26/89	Supervisor	: TC
Date anl.TPHg	: 10/27/89	Date released	: 10/30/89
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : TOM GREGORY 102689-1521
Matrix : SOIL
Date sampled : 10/26/89
Date anl.TPHg: 10/27/89
Date ext.TPHd: N/A
Date anl.TPHd: N/A

Anametrix I.D. : 8910234-03
Analyst : CB
Supervisor : TC
Date released : 10/30/89
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

C-2818

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: TOM GREGORY 102689-1532	Anametrix I.D.	: 8910234-04
Matrix	: SOIL	Analyst	: CB
Date sampled	: 10/26/89	Supervisor	: TC
Date anl.TPHg	: 10/27/89	Date released	: 10/30/89
Date ext.TPHd	: N/A	Date ext. TOG	: N/A
Date anl.TPHd	: N/A	Date anl. TOG	: N/A

CAS #	Compound Name	Reporting Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	50	ND
108-88-3	Toluene	50	ND
100-41-4	Ethylbenzene	50	ND
1330-20-7	Total Xylenes	50	280
	TPH as Gasoline	1000	23000

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Chain of Custody Record

8910234

DATE 10/24/89 PAGE 1 OF 1

R.I.W. & ASSOCIATES

43289 Osgood Road
Fremont, CA 94539

Environmental Services
(415) 623-0480

CLIENT TOM SHEENAN
ADDRESS 5513-15 Shattuck
Emeryville CA

PROJECT
SAMPLERS (SIGNATURE)

SAMPLE NO	DATE	TIME	LOCATION	CAM METALS (18)	PR. POLLUTANT METALS (13)	GENERAL MINERALS	OIL & GREASE	PETROLEUM HYDROCARBONS	BASE/NEU/ACIDS (ORGANICS)	PESTICIDES	VOLATILE ORGANICS (601/602)	VOLATILE ORGANICS (624)	TOC	PARAMETERS: TPH GAS w/ BTXE	OTHER: TPH GAS	OTHER: BTXE				NUMBER OF CONTAINERS	OBSERVATIONS/ COMMENTS
122481-1455	10/24/89	1455	NW CORNER OF EXCAV												✓					1	~~Hold~~ ~~RCG 10/27/89~~
122481-1500		1500	"													✓						
122481-1520		1520	"											DID NOT							Duplicate of 1500
122481-1512		1512	NE CORNER OF EXCAVATION											✓								
122481-1521		1521	SE CORNER OF EXCAVATION											✓								
122481-1532		1532	STOCKPILE COMPOSITE											✓								

RELINQUISHED BY
Signature: David C. Glick
Printed Name: DAVID C. GLICK
Company:

RELINQUISHED BY
Signature:
Printed Name:

DATE 10/24/89 TIME 1750

RECEIVED BY
Signature:
Printed Name:
Company:

DATE
TIME

RECEIVED BY
Signature:
Printed Name:

DATE
TIME

RELINQUISHED BY
Signature:
Printed Name:
Company:

DATE
TIME

RELINQUISHED BY
Signature:
Printed Name:

DATE
TIME

RECEIVED BY
Signature:
Printed Name:
Company:

DATE
TIME

RECEIVED BY (laboratory)
Signature: Jonathan Russell
Printed Name: Annmatrix

DATE 10/25/89
TIME 17:55

TOTAL NUMBER OF CONTAINERS

METHOD OF SHIPMENT

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS

24 HR RUSH

C-2820

ATTACHMENT C

Summarized Analytical Results

Attachment C Soil & Water Analytical Results
Goldsmith Lathrop, Emeryville, California

SAMPLE NO.	Total Petroleum Hydrocarbons Gasoline	Benzene	Toluene	Xylenes	Ethylbenze
1512	ND	ND	ND	ND	ND
1532	ND	ND	ND	ND	ND
1532-Comp	23000	ND	ND	280	ND
1500-sewer water	2800	32	240	400	61

Note: All concentrations expressed in micrograms per kilogram (ug/kg), or parts per billion (ppb)

white -env.health
yellow -facility
pink -files

ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

Hazardous Materials Inspection Form

80 Swan Way, #200
Oakland, CA 94621
(415) 271-4320

II,III

Site ID # ____ Site Name Sherman Williams Today's Date [illegible]

Site Address 5813 shellmound

City Emeryville Zip 94608 Phone ____

____ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:
- ____ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- ____ II. Business Plans, Acute Hazardous Materials
- ✓ III. Underground Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

II.A BUSINESS PLANS (Title 19)

___	1. Immediate Reporting	2703
___	2. Bus. Plan Stds.	25503(b)
___	3. RR Cars > 30 days	25503.7
___	4. Inventory Information	25504(a)
___	5. Inventory Complete	2730
___	6. Emergency Response	25504(b)
___	7. Training	25504(c)
___	8. Deficiency	25505(a)
___	9. Modification	25505(b)

II.B ACUTELY HAZ. MATLS

___	10. Registration Form Filed	25533(a)
___	11. Form Complete	25533(b)
___	12. RMPP Contents	25534(c)
___	13. Implement Sch. Req'd? (Y/N)	___
___	14. Offsite Conseq. Assess.	25524(c)
___	15. Probable Risk Assessment	25534(d)
___	16. Persons Responsible	25534(g)
___	17. Certification	25534(i)
___	18. Exemption Request? (Y/N)	25536(b)
___	19. Trade Secret Requested?	25538

III. UNDERGROUND TANKS (Title 23)

General
- ___ 1. Permit Application — 25284 (H&S)
- ___ 2. Pipeline Leak Detection — 25292 (H&S)
- ___ 3. Records Maintenance — 2712
- ___ 4. Release Report — 2651
- ___ 5. Closure Plans — 2670

Monitoring for Existing Tanks
- ___ 6. Method
  - 1) Monthly Test
  - 2) Daily Vadose
    - Semi-annual gndwater
    - One time soils
  - 3) Daily Vadose
    - One time soils
    - Annual tank test
  - 4) Monthly Gndwater
    - One time soils
  - 5) Daily Inventory
    - Annual tank testing
    - Cont pipe leak det
    - Vadose/gndwater mon.
  - 6) Daily Inventory
    - Annual tank testing
    - Cont pipe leak det
  - 7) Weekly Tank Gauge
    - Annual tank tstng
  - 8) Annual Tank Testing
    - Daily Inventory
  - 9) Other ____
- ___ 7. Precis Tank Test — 2643
  Date: ____
- ___ 8. Inventory Rec. — 2644
- ___ 9. Soil Testing. — 2646
- ___ 10. Ground Water. — 2647

New Tanks
- ___ 11. Monitor Plan — 2632
- ___ 12. Access, Secure — 2634
- ___ 13. Plans Submit — 2711
  Date: ____
- ___ 14. As Built — 2635
  Date: ____

Rev 6/88

Comments:

observed removal of 1 UGT
2,000 gallon Gasoline Tank

water was leaking into the excavation from east wall, considerable water was present in excavation. Hydrocarbon floating on water surface was thick and seemed likely to derive from tank wrapping. No obvious holes observed in tank

1 water sample collected
1 soil sample collected from either end of excavation
1 composite of excavated soil collected

24 hour turnaround on samples

C-2823

II, III

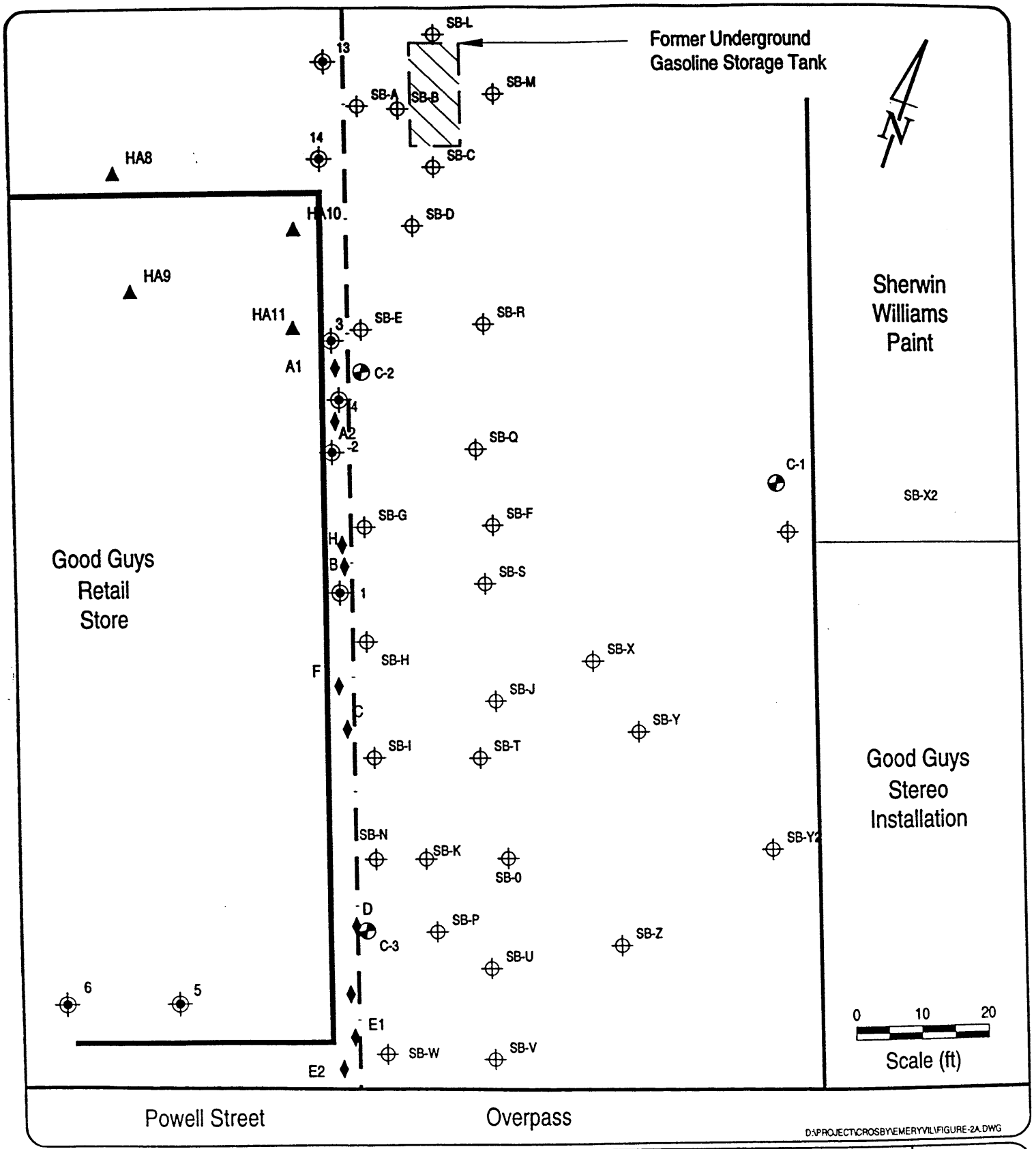
Contact: ____

Title: ____ Inspector: ____

Signature: ____ Signature: [signature]

5813-5815 Shellmound Street

Borehole Locations and Logs from Cambria, 1995



CAMBRIA
Environmental Technology, Inc.

EXPLANATION

- E1 ♦ ETS Soil Samples; 1989 and 1991
- HA9 ▲ McLaren Soil Samples; 1989
- 5 ⊕ Gils Associates Boring; 10/88
- SB-K ⊕ Cambria Boring; 9/94 and 12/94
- C-3 ◕ Cambria Monitoring Well; 12/94
- EW-1 ◕ ETS Extraction Well; 1989

Soil Boring and Monitoring Well Locations

5813-15 Shellmound Street
Emeryville, California

FIGURE

3

DRILLING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

Well ID **C-1** Boring ID **C-1**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				CONCRETE
				Gravelly SILT; (ML); Grayish Brown; damp; 50% silt, 10% sand, 40% gravel; Moderate estimated hydraulic conductivity.
5				
				Silty CLAY; (CL); Grayish black; wet; Moderate plasticity; 50% clay, 20% silt, 10% sand, 20% gravel; Low estimated hydraulic conductivity.
	6 6 6			
10				
	1 3 8			SAND; (SW); Brown; soft; damp; low plasticity; 10% clay, 30% silt; 30% sand, 30% gravel; Low estimated hydraulic conductivity
15				
				CLAY stringer
	4 5 6			Gravelly SAND; (SW); Brown; Medium dense; wet; 20% clay, 10% silt, 50% sand, 20% gravel; Moderate estimated hydraulic conductivity
	3 6 9			
20				
25				

TPHg (ppm)	Graphic Log	Well Construction Graphics	Depth Feet	Well Construction Details
			0	T.O.C. Elev. NA
				locking well cap with traffic-rated vault
			5	
			10	
			15	
			20	Bottom of well
			25	

Driller **Soils Exploration**	Development Yield	Bentonite Seal **2' to 4'**
Logged By **BGW**	Well Casing **2"** Dia. **0'** to **5'**	Sand Pack **Monterey Sand**
Drilling Started **12/9/94**	Casing Type **Schedule 40 PVC**	Sand Pack Type **#2/16**
Drilling Completed **12/9/94**	Well Screen **2"** Dia. **5'** to **18'**	Static Water Level **8.00** ft Depth
Construction Completed **12/9/94**	Screen Type **Schedule 40 PVC**	Date
Development Completed	Slot Size **0.010-inch**	Notes: **East side of site**
Water Bearing Zones	Drilling Mud	
	Grout Type **Portland I/II**	

WELL 19122 2/27/95

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: **Crosby, Heafey, Roach, and May**

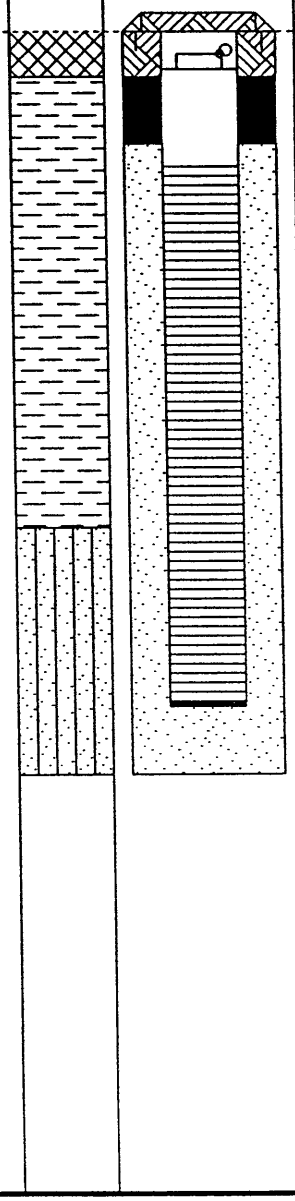
Project No: Phase Task **010**

Well ID **C-2** Boring ID **C-2**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**CONCRETE**
				Organic CLAY; (OL); Grayish black; damp; soft; medium plasticity; 50% clay, 20% silt, 20% sand, 10% gravel; Moderate estimated hydraulic conductivity.
5				
10				Silty SAND; (SM); Brown; moist; Moderate plasticity; 20% clay, 30% silt, 50% sand; Low estimated hydraulic conductivity.
15				
20				
25				



Well Construction Details

T.O.C. Elev. NA

Locking well cap with traffic-rated vault

Bottom of well

Driller	Soils Exploration	Development Yield		Bentonite Seal	2' to 3.5'
Logged By	BGW	Well Casing	2" Dia. 0' to 3'	Sand Pack	Monterey Sand
Drilling Started	12/9/94	Casing Type	Schedule 40 PVC	Sand Pack Type	#2/16
Drilling Completed	12/9/94	Well Screen	2" Dia. 3' to 15'	Static Water Level	ft Depth
Construction Completed	12/9/94	Screen Type	Schedule 40 PVC	Date	
Development Completed		Slot Size	0.010-inch	Notes:	Northwest side of site
Water Bearing Zones		Drilling Mud			
		Grout Type	Portland I/II		

WELL 19122 2/27/95

Cambria Environmental Technology, Inc.

DRILLING LOG

Client: **Crosby, Heafey, Roach, and May**

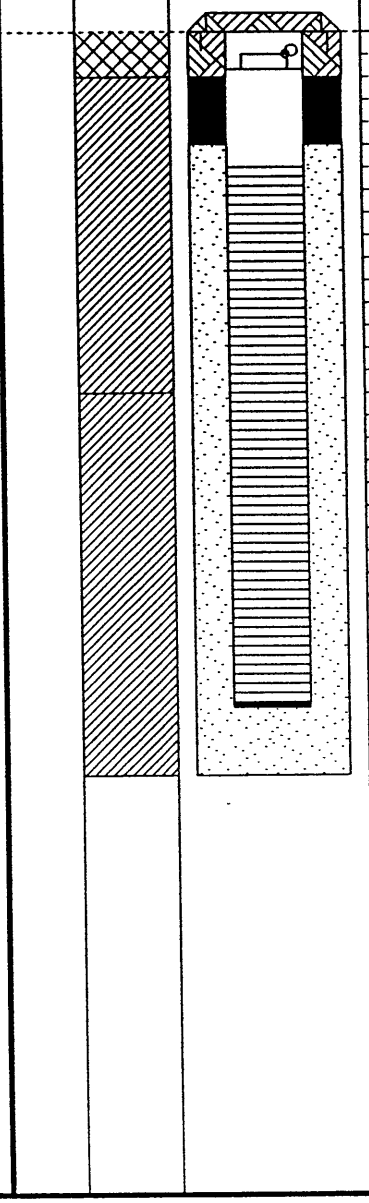
Project No: Phase Task **010**

Well ID **C-3** Boring ID **C-3**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			**CONCRETE**
				Silty SAND; (SM); Black; moist; soft; low plasticity; 30% clay, 10% silt, 50% sand, 10% gravel; Low estimated hydraulic conductivity.
				Sandy CLAY; (CL); Grayish black; wet; medium plasticity; 40% clay, 20% silt, 40% sand; Low estimated hydraulic conductivity



Well Construction Details

T.O.C. Elev. NA

Locking well cap with traffic-rated vault

Bottom of well

Driller	Soils Exploration	Development Yield		Bentonite Seal	1' to 2.5'
Logged By	BGW	Well Casing	2" Dia. 0' to 3'	Sand Pack	Monterey Sand
Drilling Started	12/9/94	Casing Type	Schedule 40 PVC	Sand Pack Type	#2/16
Drilling Completed	12/9/94	Well Screen	2" Dia. 3' to 15'	Static Water Level	ft Depth
Construction Completed	12/9/94	Screen Type	Schedule 40 PVC	Date	
Development Completed		Slot Size	0.010-inch	Notes:	Southwest side of site
Water Bearing Zones		Drilling Mud			
		Grout Type	Portland I/II		

WELL 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 000

Boring ID SB-A

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Silty CLAY: (CL); Grayish green; soft; damp; 20% silt, 80% clay; Low estimated hydraulic conductivity.
5	3 2 2			
				Organic CLAY: (OL); Black; very soft; wet; 60% clay, 40% silt; Low estimated hydraulic conductivity.
10	3 2 1			
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics

Depth Feet	Additional Comments
0	
5	
10	
15	Bottom of boring

Driller Soils Exploration

Logged By NSM

Water-Bearing Zones

Drilling Started 9/22/94

Drilling Completed 9/22/94

Grout Type Portland Type I/II

Notes: Property line west of tank

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

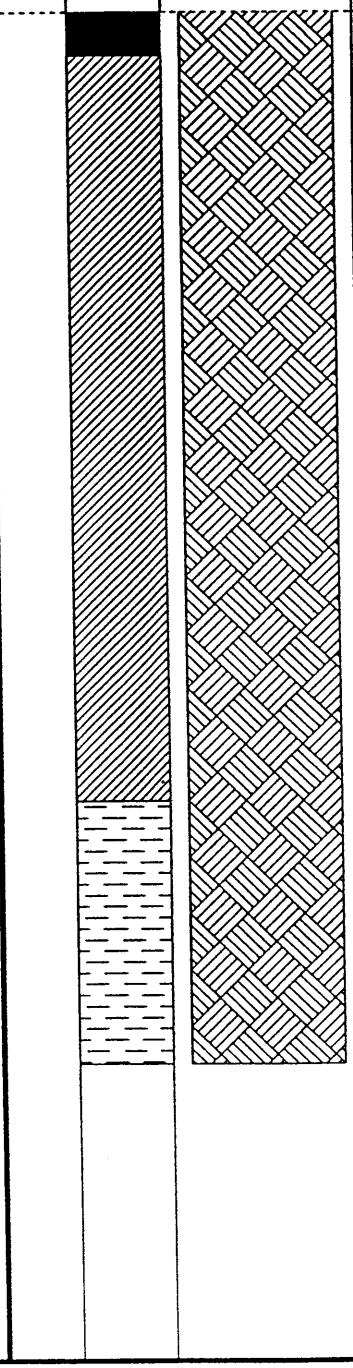
Project No: Phase Task **000**

Boring ID **SB-B**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Clayey SILT: (MH); Dark grey; very soft; wet; Low plasticity; 20% clay, 80% silt; Low estimated hydraulic conductivity.
5	P			
10				**Organic CLAY**: (OL); Black; very soft; wet; Low plasticity; 60% clay, 40% silt; Low estimated hydraulic conductivity.
	P			
15				



Additional Comments: Bottom of boring

Driller **Soils Exploration**	Drilling Started **9/22/94**	Notes: **Immediately west of tanks**
Logged By **NSM**	Drilling Completed **9/22/94**	
Water-Bearing Zones	Grout Type **Portland Type I/II**	

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

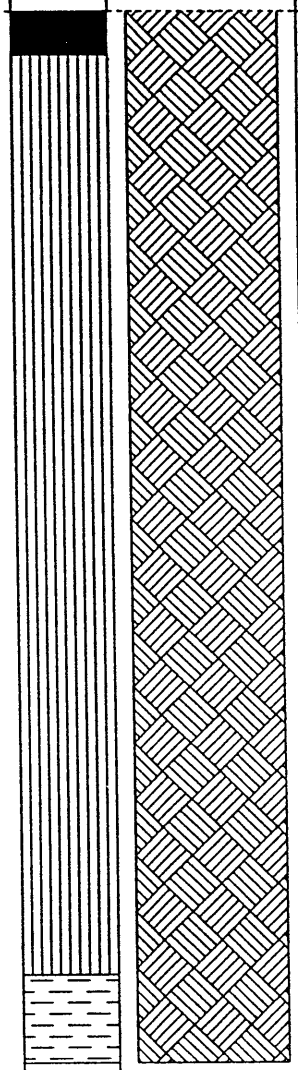
Boring ID **SB-C**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				SILT; (ML); Gray; soft; wet; Low plasticity; 20% clay, 80% silt; Moderate estimated hydraulic conductivity.
5	P			
10	P			**Organic CLAY**; (OL); Black; soft; wet; Low to medium plasticity; 60% clay, 40% silt; Low estimated hydraulic conductivity.
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
15	Bottom of boring

Driller **Soils Exploration**

Logged By **NSM**

Water-Bearing Zones

Drilling Started **9/22/94**

Drilling Completed **9/22/94**

Grout Type **Portland Type I/II**

Notes: **Immediately south of tanks**

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

Boring ID **SB-D**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Clayey SILT; (ML); Gray; soft; wet; Low plasticity; 20% clay, 30% silt, 20% sand, 30% gravel; Moderate estimated hydraulic conductivity.
5				
10				Organic CLAY; (OL); Black; soft; wet; Low to medium plasticity; 60% clay, 40% silt; Low estimated hydraulic conductivity.
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments

Bottom of boring

Driller **Soils Exploration**

Logged By **NSM**

Water-Bearing Zones

Drilling Started **9/22/94**

Drilling Completed **9/22/94**

Grout Type **Portland Type I/II**

Notes: **Southeast of tanks on property line**

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

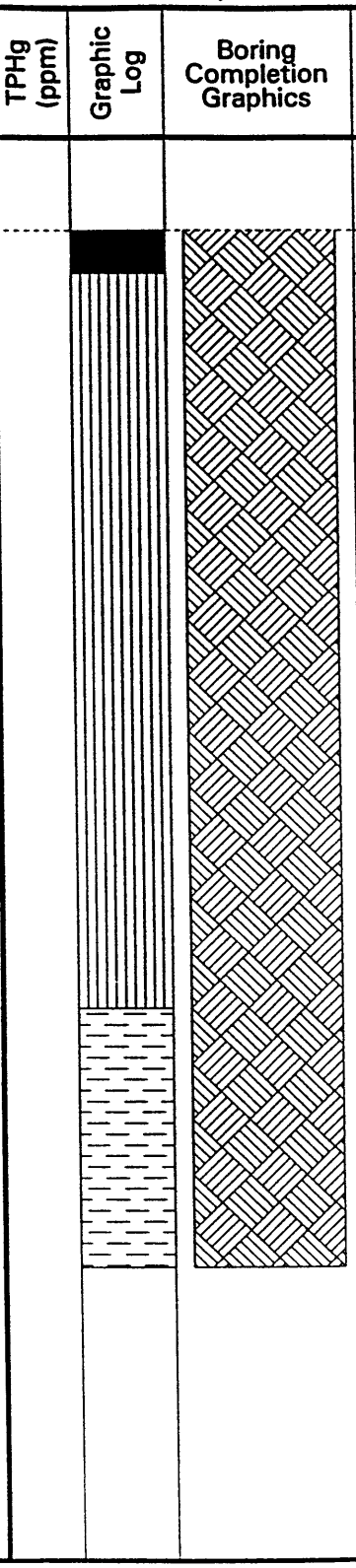
Project No: Phase Task **000**

Boring ID **SB-E**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Clayey SILT; (ML); Black; soft; wet; Medium to high plasticity; 30% clay, 40% silt, 15% sand, 15% gravel; Low estimated hydraulic conductivity.
5				
10				Organic CLAY; (OL); Black; very soft; wet; Low to medium plasticity; 60% clay, 30% silt, 10% gravel; Low estimated hydraulic conductivity.
15				



Additional Comments: Bottom of boring

Driller **Soils Exploration**	Drilling Started **9/22/94**	Notes: **Southeast of SB-D**
Logged By **NSM**	Drilling Completed **9/22/94**	
Water-Bearing Zones	Grout Type **Portland Type I/II**	

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 000

Boring ID SB-F

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface			ASPHALT				0	
				SILT; (ML); Greenish gray; soft; wet; Low plasticity; 10% clay, 90% silt; Low estimated hydraulic conductivity.					
5								5	Bottom of boring
10								10	
15								15	

Driller Soils Exploration

Logged By NSM

Water-Bearing Zones

Drilling Started 9/22/94

Drilling Completed 9/22/94

Grout Type Portland Type I/II

Notes: Southeast of SB-D

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

Boring ID **SB-G**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Clayey SILT; (ML); Green with black matrix; soft; moist; Moderate plasticity; 10% clay, 80% silt, 10% gravel; Low estimated hydraulic conductivity.
5				
10				Organic CLAY; (OL); Black; very soft; wet; low plasticity; 60% clay, 30% silt, 10% sand; Low estimated hydraulic conductivity.
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments

Depth Feet: 0, 5, 10, 15

Additional Comments: Bottom of boring

Driller **Soils Exploration**

Logged By **NSM**

Water-Bearing Zones

Drilling Started **9/22/94**

Drilling Completed **9/22/94**

Grout Type **Portland Type I/II**

Notes: **South of SB-D**

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

Boring ID **SB-H**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Clayey SILT; (ML); Green with black matrix; soft; moist; Moderate plasticity; 20% clay, 50% silt, 20% sand, 10% gravel; Low estimated hydraulic conductivity.
5				SILT; (ML); Greenish gray; very soft; wet; no plasticity; 5% clay, 95% silt; Moderate estimated hydraulic conductivity.
10				Organic CLAY; (OL); Black; soft; wet; low plasticity; 60% clay, 30% silt, 10% sand; Low estimated hydraulic conductivity.
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments

0

5

10

15

Bottom of boring

Driller **Soils Exploration**

Logged By **NSM**

Water-Bearing Zones

Drilling Started **9/22/94**

Drilling Completed **9/22/94**

Grout Type **Portland Type I/II**

Notes: **Southeast of SB-D**

BOR 19122 2/24/95

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 000

Boring ID SB-I

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface			ASPHALT				0	
				Gravelly SAND; (GW); Grayish brown; medium dense; moist; 5% clay, 10% silt, 60% sand, 30% gravel; Moderate to high estimated permeabilty.					
5								5	Bottom of boring
10								10	
15								15	

Driller Soils Exploration

Logged By NSM

Water-Bearing Zones

Drilling Started 9/22/94

Drilling Completed 9/22/94

Grout Type Portland Type I/II

Notes: Southeast of SB-D

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

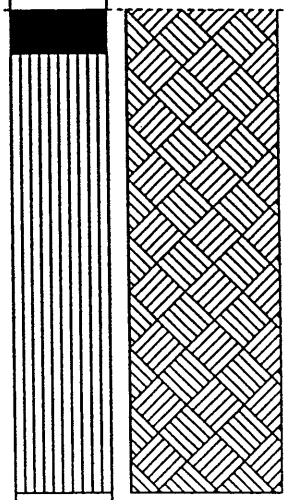
Boring ID **SB-J**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Clayey SILT; (ML); Greenish gray; soft; moist to wet; low plasticity; 10% clay, 80% silt, 10% gravel; Low estimated permeabilty.
5				
				Bottom of boring
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments



Driller **Soils Exploration**	Drilling Started **9/22/94**	Notes: **Southeast of SB-D**
Logged By **NSM**	Drilling Completed **9/22/94**	
Water-Bearing Zones	Grout Type **Portland Type I/II**	

BOR 19122 2/24/95

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

Boring ID **SB-K**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Sandy SILT; (ML); Brownish black; soft; wet; Low plasticity; 5% clay, 70% silt, 20% sand, 5% gravel; Low estimated hydraulic conductivity.
5				
				Clayey SILT; (ML); Dark green; soft; wet; Low plasticity; 20% clay, 60% silt, 20% sand; Low estimated hydraulic conductivity.
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics

Depth Feet	Additional Comments
0	
5	
10	
15	Bottom of boring

Driller **Soils Exploration**	Drilling Started **9/22/94**	Notes: **Southeast of SB-D**
Logged By **NSM**	Drilling Completed **9/22/94**	
Water-Bearing Zones	Grout Type **Portland Type I/II**	

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

Boring ID **SB-L**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				SILT; (ML); Greenish gray; very soft; wet; no plasticity; 10% clay, 90% silt; Low to medium estimated permeabilty.
5				
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics

Depth Feet	Additional Comments
0	
5	Bottom of boring
10	
15	

Driller **Soils Exploration**

Logged By **NSM**

Water-Bearing Zones

Drilling Started **9/22/94**

Drilling Completed **9/22/94**

Grout Type **Portland Type I/II**

Notes: **Northwest of SB-D**

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

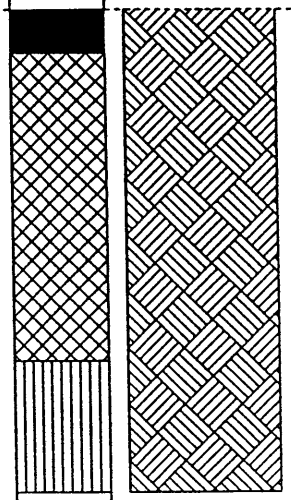
Project No: Phase Task 000

Boring ID SB-M

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft,

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Sandy Gravel FILL
5				SILT; (ML); Greenish gray; very soft; wet; no plasticity; 10% clay, 90% silt; Low to medium estimated permeabilty.
10				
15				



Additional Comments: Bottom of boring

Driller Soils Exploration	Drilling Started 9/22/94	Notes: Northwest of SB-D
Logged By NSM	Drilling Completed 9/22/94	
Water-Bearing Zones	Grout Type Portland Type I/II	

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 000

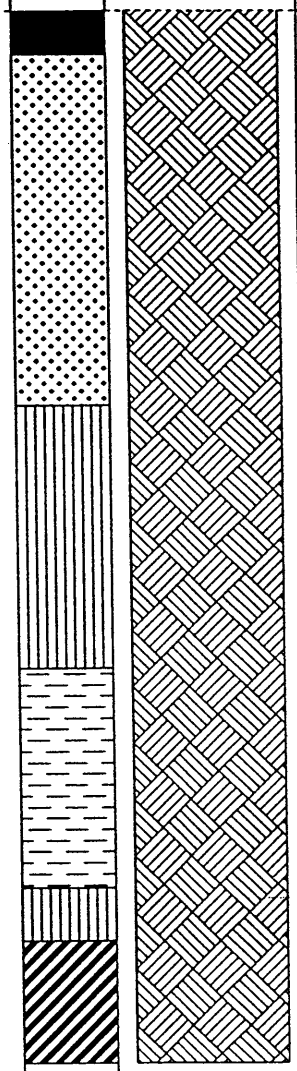
Boring ID SB-N

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
	15 25 30			**ASPHALT** Gravelly SAND; (SW); Gray; hard; moist; 20% silt, 50% sand, 30% gravel; High estimated hydraulic conductivity.
5				
				Clayey SILT; (ML); Black; firm; moist; Moderate plasticity; 30% clay, 70% silt; Low estimated hydraulic conductivity.
				Organic CLAY; (OL); Black; very soft; wet; low plasticity; 60% clay, 40% silt; Low estimated hydraulic conductivity
10				**Sandy shell-laden layer**
				Silty CLAY; (CH); Grayish brown; Stiff; wet; high plasticity; 60% clay, 40% silt; Very low estimated hydraulic conductivity
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments



0 5 10 15

Bottom of boring

Driller Soils Exploration

Logged By NSM

Water-Bearing Zones

Drilling Started 9/22/94

Drilling Completed 9/22/94

Grout Type Portland Type I/II

Notes: Southeast of SB-D

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **000**

Boring ID **SB-O**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly SAND; (SW); Black; hard; moist to wet; 10% clay, 20% silt, 40% sand, 30% gravel; Low to moderate estimated hydraulic conductivity.
				slag-like material present
5				
				Silty-Gravelly SAND; (SM); Black; firm; moist; Moderate plasticity; 5% clay, 15% silt, 60% sand, 20% gravel; Moderate to high estimated hydraulic conductivity.
				Sandy SILT; (ML); Black; soft; wet; no plasticity; 5% clay, 60% silt,; 25% sand, 10% gravel; Low to moderate estimated hydraulic conductivity
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments

Bottom of boring

Driller **Soils Exploration**	Drilling Started **9/22/94**	Notes: **Southeast of SB-D**
Logged By **NSM**	Drilling Completed **9/22/94**	
Water-Bearing Zones	Grout Type **Portland Type I/II**	

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 000

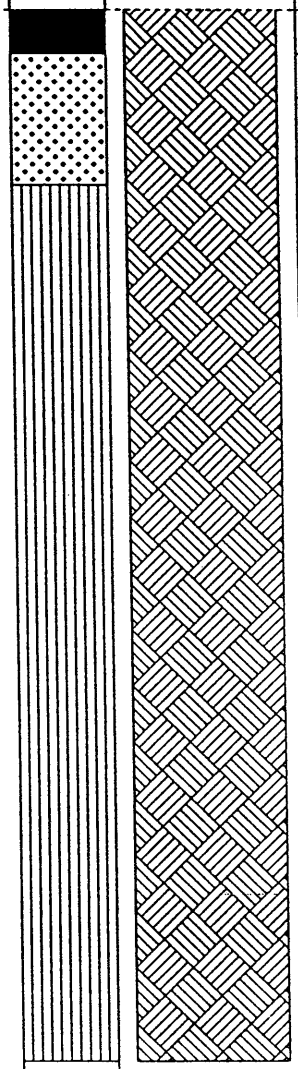
Boring ID SB-P

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly Sand FILL: (SW); Black; Firm to hard; wet; 10% clay, 20% silt, 50% sand, 20% gravel; Moderate estimated hydraulic conductivity.
				Clayey SILT: (ML); Black; firm to hard; damp to moist; 20% clay, 60% silt, 20% sand; Low estimated hydraulic conductivity
5				
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
15	Bottom of boring

Driller Soils Exploration

Logged By NSM

Water-Bearing Zones

Drilling Started 9/22/94

Drilling Completed 9/22/94

Grout Type Portland Type I/II

Notes: Southeast of SB-D

BOR 19122 2/24/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 010

Boring ID SB-Q

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface			ASPHALT				0	
				Clayey SAND; (SC); Black; soft; damp; medium plasticity; 20% clay, 30% silt, 20% sand, 30% gravel; Low estimated hydraulic conductivity.					
5								5	
				Silty CLAY; (CL); Black; soft; wet; 40% clay, 20% silt, 10% sand, 20%; gravel; Low estimated hydraulic conductivity.					
10								10	
									Bottom of boring
15								15	

Driller Soils Exploration

Logged By BGW

Water-Bearing Zones

Drilling Started 12/7/94

Drilling Completed 12/7/94

Grout Type Portland Type I/II

Notes: North/Tank side

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

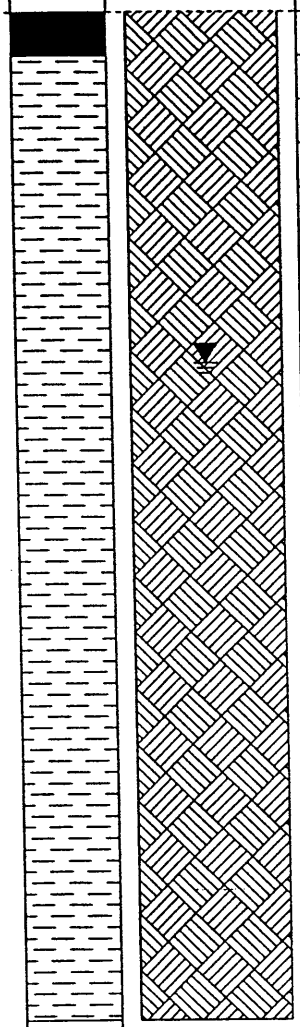
Boring ID **SB-R**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Organic CLAY; (OL); Black; soft; moist; medium plasticity; 20% clay, 30% silt, 20% sand, 30% gravel; Low estimated hydraulic conductivity.
5				
10				low plasticity
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
	Bottom of boring
15	

Driller **Soils Exploration**

Logged By **BGW**

Water-Bearing Zones

Drilling Started **12/7/94**

Drilling Completed **12/7/94**

Grout Type **Portland Type I/II**

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

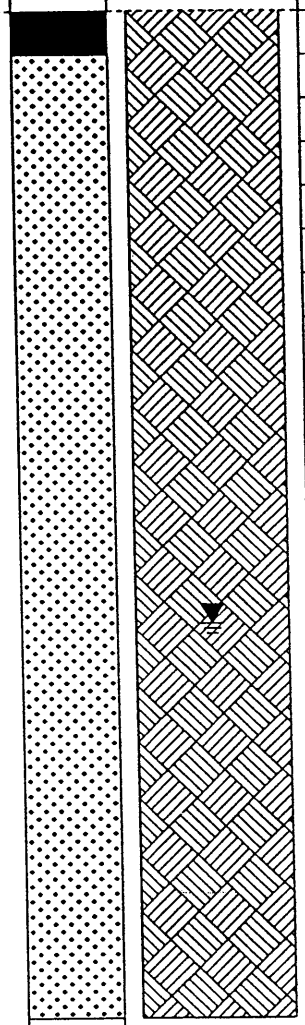
Boring ID **SB-S**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly SAND; (SW); Gray; dense; moist; 10% clay, 10% silt, 60% sand, 30% gravel; High estimated hydraulic conductivity.
5				
				Grayish black; moist; 20% silt, 50 sand, 30%; gravel
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
	Bottom of boring
15	

Driller **Soils Exploration**

Logged By **BGW**

Water-Bearing Zones

Drilling Started **12/7/94**

Drilling Completed **12/7/94**

Grout Type **Portland Type I/II**

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

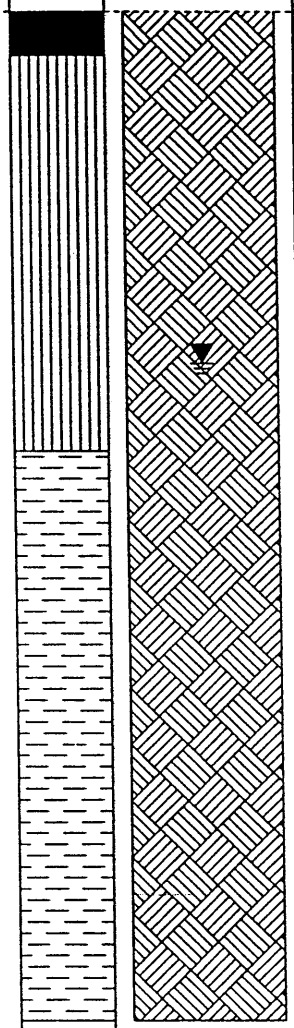
Boring ID **SB-T**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Sandy SILT; (ML); Black; soft; wet; 10% clay, 70% silt, 10% gravel; Moderate estimated hydraulic conductivity.
5				
				Organic CLAY; (OL); Black; very soft; medium plasticity; wet; 70% clay, 10% silt, 20% gravel; very low estimated hydraulic conductivity.
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
	Bottom of boring
15	

Driller **Soils Exploration**

Logged By **BGW**

Water-Bearing Zones

Drilling Started **12/7/94**

Drilling Completed **12/7/94**

Grout Type **Portland Type I/II**

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 010

Boring ID SB-U

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface							0	
				ASPHALT					
				Silty SAND; (SM); Black; firm; wet; 10% clay, 20% silt, 50% sand, 20% gravel; Moderate estimated hydraulic conductivity.					
5								5	
				Organic CLAY; (OL); Black; very soft; medium plasticity; dry; 70% clay, 10% silt, 20% gravel; very low estimated hydraulic conductivity.					
10								10	
									Bottom of boring
15								15	

Driller Soils Exploration	Drilling Started 12/7/94	Notes:
Logged By BGW	Drilling Completed 12/7/94	
Water-Bearing Zones	Grout Type Portland Type I/II	

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 010

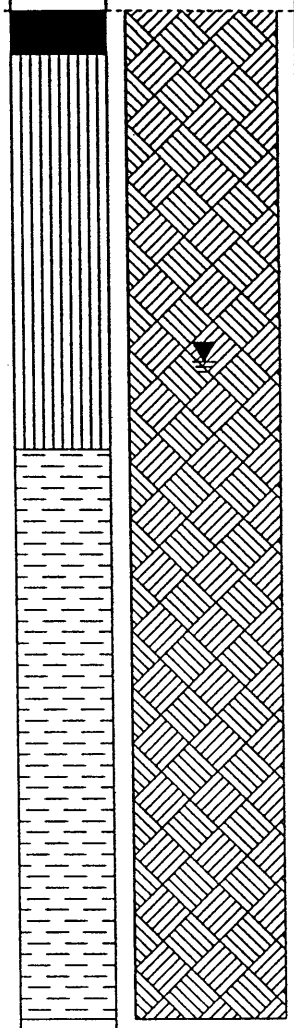
Boring ID SB-V

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly SAND; (SW); Black; firm; wet; 10% clay, 20% silt, 50% sand, 20% gravel; Moderate estimated hydraulic conductivity.
5				
				Organic CLAY; (OL); Black; very soft; medium plasticity; wet; 70% clay, 10% silt, 20% gravel; moderate estimated hydraulic conductivity.
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
	Bottom of boring
15	

Driller Soils Exploration

Logged By BGW

Water-Bearing Zones

Drilling Started 12/7/94

Drilling Completed 12/7/94

Grout Type Portland Type I/II

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

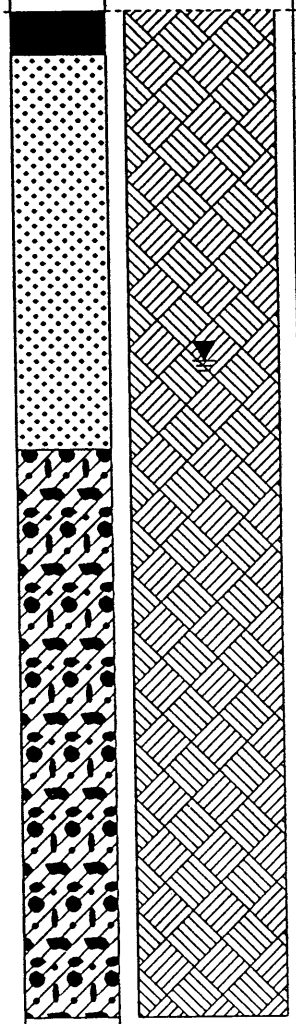
Boring ID **SB-W**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly SAND; (SW); Black; firm; wet; 20% clay, 10% silt, 50% sand, 20% gravel; Low to moderate estimated hydraulic conductivity.
5				
				Clayey GRAVEL; (GC); Black; firm to hard; low plasticity; wet; 30% clay, 10% sand, 50% gravel; low estimated hydraulic conductivity.
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments



Bottom of boring

Driller **Soils Exploration**	Drilling Started **12/7/94**	Notes:
Logged By **BGW**	Drilling Completed **12/7/94**	
Water-Bearing Zones	Grout Type **Portland Type I/II**	

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 010

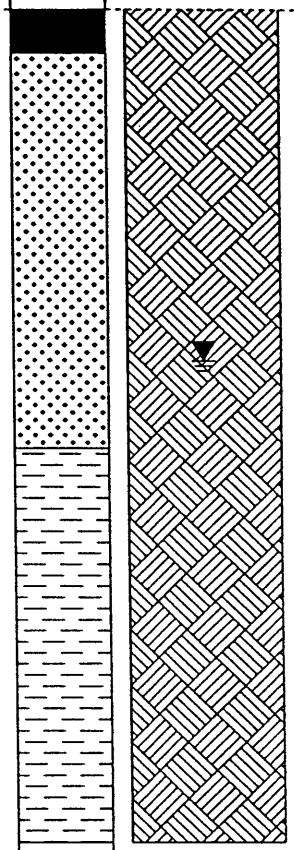
Boring ID SB-X

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft,

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly SAND; (SW); Brownish red; dry; 10% clay, 10% silt, 50% sand, 20% gravel; Low estimated hydraulic conductivity.
5				
				Organic CLAY; (OL); Gray; soft; low plasticity; wet; 60% clay, 30% silt, 10% gravel; Very low estimated hydraulic conductivity.
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	Bottom of boring
15	

Driller Soils Exploration	Drilling Started 12/7/94	Notes:
Logged By BGW	Drilling Completed 12/7/94	
Water-Bearing Zones	Grout Type Portland Type I/II	

BORING LOG

Client: Crosby, Heafey, Roach, and May

Project No: Phase Task 010

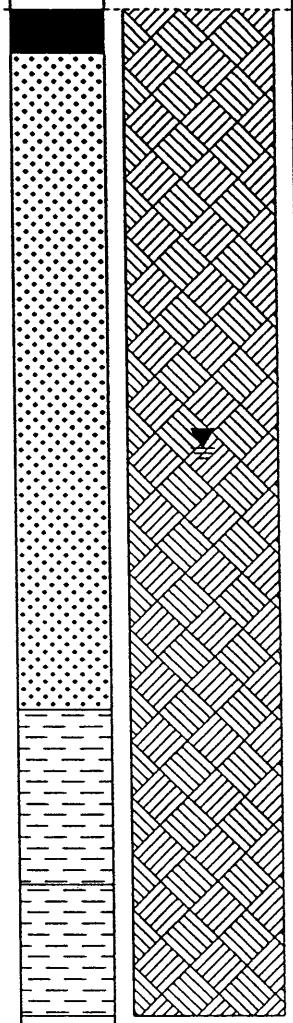
Boring ID SB-X2

Location 5813 Shellmound Street, Emeryville, CA

Surface Elev. NA ft, Page 1 of 1

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Gravelly SAND; (SW); Gray; damp; 10% clay, 20% silt, 50% sand, 20% gravel; Moderate estimated hydraulic conductivity
				Hard black tar layer; 8" thick
				Organic CLAY; (OL); Black; soft; wet; low plasticity; 50% clay, 20% silt, 10% sand, 20% gravel; Low estimated hydraulic conductivity.
				Clayey SILT; (ML); Brown; soft; medium plasticity; moist; 20% clay, 30% silt, 20% sand, 10% gravel; Low estimated hydraulic conductivity
5				
10				
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics | Depth Feet | Additional Comments



0 | 5 | 10 | 15

Bottom of boring

Driller Soils Exploration	Drilling Started 12/8/94	Notes:
Logged By BGW	Drilling Completed 12/8/94	
Water-Bearing Zones	Grout Type Portland Type I/II	

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

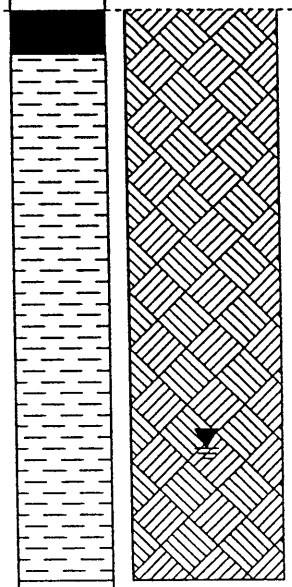
Boring ID **SB-Y**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,**

Depth Feet	Blow Count	Sample Interval	Lithologic Description
0	Ground Surface		
			ASPHALT
			Organic CLAY; (OL); Gray; soft; high plasticity; wet; 60% clay, 40% silt; Very low estimated hydraulic conductivity.
5			
10			
15			

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	Bottom of boring
15	

Driller **Soils Exploration**

Logged By **BGW**

Water-Bearing Zones

Drilling Started **12/8/94**

Drilling Completed **12/8/94**

Grout Type **Portland Type I/II**

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

Boring ID **SB-Y2**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description	TPHg (ppm)	Graphic Log	Boring Completion Graphics	Depth Feet	Additional Comments
0	Ground Surface							0	
				ASPHALT					
				SAND; (SP); Brown; wet; loose; 100% coarse sand; High estimated hydraulic conductivity					
5								5	
				Organic CLAY; (OL); Gray; soft; moist; low plasticity; 70% clay, 20% silt, 10% sand; Low estimated hydraulic conductivity.					
10								10	
				Clayey SILT; (ML); Black; medium dense; low plasticity; 20% clay, 80% silt; Low estimated hydraulic conductivity					Bottom of boring
15								15	

Driller **Soils Exploration**

Logged By **BGW**

Water-Bearing Zones

Drilling Started **12/8/94**

Drilling Completed **12/8/94**

Grout Type **Portland Type I/II**

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

BORING LOG

Client: **Crosby, Heafey, Roach, and May**

Project No: Phase Task **010**

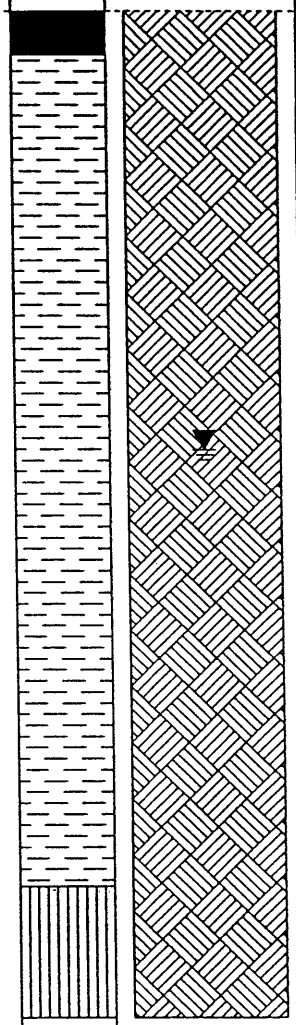
Boring ID **SB-Z**

Location **5813 Shellmound Street, Emeryville, CA**

Surface Elev. **NA ft,** Page **1** of **1**

Depth Feet	Blow Count	Sample	Interval	Lithologic Description
0	Ground Surface			
				ASPHALT
				Organic CLAY; (OL); Grayish black; soft; moist to wet; low plasticity; 70% clay, 20% silt, 10% sand; Low estimated hydraulic conductivity.
5				sea shells present
10				**Clayey SILT**; (ML); Brown; soft; medium plasticity; moist; 20% clay, 30% silt, 20% sand, 10% gravel; low estimated hydraulic conductivity
15				

TPHg (ppm) | Graphic Log | Boring Completion Graphics



Depth Feet	Additional Comments
0	
5	
10	
15	Bottom of boring

Driller **Soils Exploration**

Logged By **BGW**

Water-Bearing Zones

Drilling Started **12/8/94**

Drilling Completed **12/8/94**

Grout Type **Portland Type I/II**

Notes:

BOR 19122 2/27/95

Cambria Environmental Technology, Inc.

5713-5815 Shellmound Street

Chemical Analysis Results
Cambria, 1995

Table 1. Soil Analytic Data for Hydrocarbons
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	TPHcr	TPHd	TPHmo	TPHg	Benzene	Toluene	Ethyl benzene	Xylenes
						(Concentration in mg/kg or parts per million)				
LATHROP (5813-5815 Shellmound)										
Tank Excavation Samples										
1512	10/26/89	~4	--	--	--	nd	nd	nd	nd	nd
1521	10/26/89	~4	--	--	--	nd	nd	nd	nd	nd
1533-Comp	10/26/89	NA	--	--	--	23	nd	nd	nd	0.28
Cambria Borings (September 1994)										
SB-A	09/22/94	5.0	--	--	--	nd	nd	nd	nd	nd
SB-A	09/22/94	11.7	--	--	--	nd	nd	nd	nd	nd
SB-B	09/22/94	6.0	--	--	--	1.0	nd	nd	nd	nd
SB-B	09/22/94	11.7	--	--	--	nd	nd	nd	nd	nd
SB-C	09/22/94	5.0	--	--	--	nd	nd	nd	nd	nd
SB-C	09/22/94	11.7	--	--	--	1.1	nd	nd	nd	nd
SB-D	09/22/94	5.0	--	--	--	nd	nd	nd	nd	nd
SB-E	09/22/94	5.0	--	--	--	nd	nd	nd	nd	nd
SB-F	09/22/94	5.0	--	--	--	--	--	--	--	--
SB-G	09/22/94	3.0	--	--	--	nd	32	0.69	4.4	nd
SB-G	09/22/94	5.0	--	--	--	21	0.15	3.4	0.13	1.2
SB-G	09/22/94	11.7	--	--	--	--	--	--	--	--
SB-H	09/22/94	3.0	--	--	--	nd	nd	0.620	0.016	0.180
SB-H	09/22/94	5.0	--	--	--	15	0.052	0.066	9.8	0.380
SB-H	09/22/94	11.7	--	--	--	1.1	0.012	0.650	nd	0.010
SB-I	09/22/94	5.0	--	--	--	nd	0.011	0.0037	nd	nd
SB-J	09/22/94	5.0	--	--	--	--	--	--	--	--

Table continued on next page

Table 1. Soil Analytic Data for Hydrocarbons
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	TPHcr	TPHd	TPHmo	TPHg	Benzene	Toluene	Ethyl benzene	Xylenes
						(Concentration in mg/kg or parts per million)				
SB-N	09/22/94	3.0	--	--	--	--	--	--	--	--
SB-N	09/22/94	5.0	--	--	--	1,700	5.9	2.7	10	9.8
SB-N	09/22/94	10.5	--	--	--	2,600	18	7.3	12	14
SB-N	09/22/94	11.7	--	--	--	--	--	--	--	--
SB-O	09/22/94	5.0	--	--	--	23	0.058	0.034	0.170	0.230
SB-O	09/22/94	11.7	--	--	--	--	--	--	--	--
SB-P	09/22/94	11.7	--	--	--	2,300	17	1.8	13	10
Cambria Borings (December 1994)										
SB-Q	12/07/94	3.5	nd	nd	1,300	--	--	--	--	--
SB-Q	12/07/94	5.5	nd	8.8	26	--	--	--	--	--
SB-R	12/07/94	5.5	nd	9.6	19	--	--	--	--	--
SB-S	12/07/94	5.5	nd	7.1	21	--	--	--	--	--
SB-S	12/07/94	11	nd	nd	690	--	--	--	--	--
SB-T	12/07/94	3.5	11,000	nd	nd	--	--	--	--	--
SB-T	12/07/94	5.5	25,000	nd	68,000	--	--	--	--	--
SB-T	12/07/94	9.0	nd	nd	570	--	--	--	--	--
SB-T	12/07/94	11.0	23	nd	nd	--	--	--	--	--
SB-U	12/07/94	6.0	5,200	nd	13,000	--	--	--	--	--
SB-U	12/07/94	11.0	58	nd	nd	--	--	--	--	--
SB-V	12/07/94	4.0	42,000	nd	nd	--	--	--	--	--
SB-V	12/07/94	11.0	19	nd	nd	--	--	--	--	--
SB-W	12/07/94	4.0	240,000	nd	nd	--	--	--	--	--
SB-W	12/07/94	6.0	nd	3,900	5,600	--	--	--	--	--
SB-W	12/07/94	11.0	36	nd	nd	--	--	--	--	--
SB-X	12/08/94	5.5	nd	nd	nd	--	--	--	--	--
SB-X	12/08/94	8.5	nd	1,300	3,300	--	--	--	--	--
SB-X2	12/08/94	3.5	nd	nd	67	--	--	--	--	--

Table continued on next page

Table 1. Soil Analytic Data for Hydrocarbons
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	TPHcr	TPHd	TPHmo	TPHg	Benzene	Toluene	Ethyl benzene	Xylenes
							(Concentration in mg/kg or parts per million)			
SB-X2	12/08/94	5.5	nd	nd	87,000	--	--	--	--	--
SB-X2	12/08/94	9.0	nd	nd	nd	--	--	--	--	--
SB-X2	12/08/94	11.0	nd	150	550	--	--	--	--	--
SB-Y	12/08/94	3.5	40,000	nd	nd	--	--	--	--	--
SB-Y	12/08/94	5.5	nd	nd	nd	--	--	--	--	--
SB-Y2	12/08/94	4.0	nd	nd	nd	--	--	--	--	--
SB-Y2	12/08/94	6.0	nd	nd	nd	--	--	--	--	--
SB-Y2	12/08/94	9.0	nd	nd	nd	--	--	--	--	--
SB-Y2	12/08/94	11.0	nd	nd	nd	--	--	--	--	--
SB-Z	12/08/94	3.5	nd	nd	170	--	--	--	--	--
SB-Z	12/08/94	6.0	nd	nd	nd	--	--	--	--	--
C-1	12/09/94	5.5	nd	nd	2,300	--	--	--	--	--
C-1	12/09/94	8.5	nd	nd	23	--	--	--	--	--
C-1	12/09/94	13.5	nd	nd	nd	--	--	--	--	--
C-1	12/09/94	18.5	nd	nd	nd	--	--	--	--	--
C-2	12/09/94	3.5	nd	nd	nd	--	--	--	--	--
C-2	12/09/94	5.5	nd	31	50	--	--	--	--	--
C-2	12/09/94	8.5	nd	7.9	18	--	--	--	--	--
C-2	12/09/94	11.0	12	2.30	nd	--	--	--	--	--
C-2	12/09/94	15.0	nd	--	--	--	--	--	--	--
C-3	12/09/94	3.5	3,700	nd	nd	--	--	--	--	--
C-3	12/09/94	5.5	19,000	nd	nd	--	--	--	--	--
C-3	12/09/94	8.5	62,000	nd	nd	--	--	--	--	--
C-3	12/09/94	11.0	14	nd	nd	--	--	--	--	--
C-3	12/09/94	14.0	nd	nd	nd	--	--	--	--	--
C-3	12/09/94	15.0	81.00	--	--	--	--	--	--	--

Table continued on next page

Table 1. Soil Analytic Data for Hydrocarbons
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	TPHcr	TPHd	TPHmo	TPHg	Benzene	Toluene	Ethyl benzene	Xylenes
							(Concentration in mg/kg or parts per million)			
COLEY AND HERRING INVESTMENT (5800 Christie Street)										
Borings by Gils Associates										
1 (9665)	12/28/88	4.0	--	--	--	--	nd	1,400	3	8.4
1 (9666)	12/28/88	6.0	--	--	--	--	nd	26	nd	nd
2 (9668)	12/28/88	7.0	--	--	--	--	nd	87	nd	nd
2 (9667)	12/28/88	12.0	--	--	--	35	nd	56	nd	nd
3 (9669)	12/28/88	5.0	--	--	--	--	nd	33	nd	nd
3 (9670)	12/28/88	12.0	--	--	--	1.4	nd	0.81	nd	nd
4 (9653)	10/12/88	2.4	--	--	--	--	nd	2800	28	42
5 (9661)	10/12/88	3.4	--	--	--	--	nd	nd	nd	nd
6 (9660)	10/12/88	3.0	--	--	--	--	nd	0.0060	nd	0.0049
7 (9658)	10/12/88	3.0	--	--	--	--	nd	nd	nd	nd
8 (9659)	10/12/88	3.3	--	--	--	--	nd	nd	nd	nd
9 (9655)	10/12/88	2.0	--	--	--	--	nd	0.0032	nd	nd
10 (9656)	10/12/88	6.3	--	--	--	--	nd	0.0040	nd	nd
11 (9654)	10/12/88	4.0	--	--	--	--	nd	0.0055	nd	nd
12 (9657)	10/12/88	2.0	--	--	--	--	nd	0.0028	nd	nd
13 (9663)	10/27/88	6.0	--	--	--	nd	nd	nd	nd	nd
13 (9664)	10/27/88	11.0	--	--	--	3	nd	nd	nd	nd
14 (9662)	10/27/88	11.0	--	--	--	5	nd	nd	nd	0.057
McLaren Foundation Excavation Samples										
HA-1	04/14/89	2.3	--	--	--	--	nd	0.019	nd	nd
HA-4	04/14/89	2.0	--	--	--	--	nd	0.16	nd	nd
HA-5	04/14/89	2.7	--	--	--	--	nd	0.80	nd	nd
HA-6	04/14/89	3.5	--	--	--	--	nd	0.12	nd	nd
HA-7	04/14/89	3.5	--	--	--	--	nd	0.072	nd	nd

Table continued on next page

Table 1. Soil Analytic Data for Hydrocarbons
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	TPHcr	TPHd	TPHmo	TPHg	Benzene	Toluene	Ethyl benzene	Xylenes
							(Concentration in mg/kg or parts per million)			
HA-8	04/14/89	3.5	--	--	--	--	nd	0.048	nd	nd
HA-9	04/14/89	3.5	--	--	--	--	nd	nd	nd	nd
HA-10	04/14/89	3.5	--	--	--	--	nd	0.049	nd	nd
HA-11	04/14/89	2.5	--	--	--	--	nd	0.030	nd	nd
ETS Excavation Wall Samples										
A1	1989	5.0	--	--	--	--	nd	nd	nd	nd
A2	1989	5.0	--	--	--	--	nd	0.11	nd	nd
B	1989	5.0	--	--	--	--	nd	180	3.8	28
C	1989	5.0	--	--	--	--	nd	320	9.3	48
D	1989	5.0	--	--	--	--	nd	1.8	nd	nd
E1	1989	5.0	--	--	--	--	0.70	0.70	0.60	1.1
E2	1989	5.0	--	--	--	--	nd	nd	nd	nd
F	1989	5.0	--	--	--	--	nd	2,700	14	35
Confirmation Borings After SVE										
G	12/03/91	3-5	--	--	--	nd	nd	nd	nd	nd
H	12/03/91	3-5	--	--	--	1.5	nd	0.076	0.0062	0.10
I	12/03/91	3-5	--	--	--	nd	nd	nd	nd	nd

Abbreviations
TPHcr = Total petroleum hydrocarbons as creosote by EPA Method 5020, 5030 or by modified EPA Method 8015
TPHd = Total petroleum hydrocarbons as diesel by EPA Method 5020, 5030 or by modified EPA Method 8015
TPmo = Total petroleum hydrocarbons as motor oil by EPA Method 5020, 5030 or by modified EPA Method 8015
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 5020, 5030 or by modified EPA Method 8015
BTEX = BTEX compounds by EPA Method 601/8240 unless 8020/5030 performed also.
-- = Constituent not analyzed
nd = Not detected, or no limit given by previous consultant

Table 3. Soil Analytic Data for Polynucleararomatics (PNAs)
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo-(a)an-thracene	Benzo-(b)fluor-anthene	Benzo-(k)fluor-anthene	Benzo-(a) pyrene	Benzo-(g,h,i) perylene	Chrysene	Fluor-anthene	Flourene	Indeno-(1,2,3-cd) pyrene	2-Methyl-naphtha-lene	Naphtha-lene	Phenan-threne	Pyrene
			(Concentration in mg/kg or parts per million)															
LATHROP (5813-5815 Shellmound)																		
Cambria, October 1994																		
SB-G	09/22/94	5.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
SB-N	09/22/94	10.5	380	2,100	960	1,100	nd	nd	1,100	880	870	500	880	650	740	5,900	3,800	2,800
Cambria, December 1994																		
SB-T	12/07/94	5.5	720	nd	250	190	140	120	210	130	290	890	250	110*	170	1,400	1,600	1
SB-X2	12/08/94	5.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
C-2	12/09/94	5.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
C-3	12/07/94	5.5	nd	1,500	640	540	390	480	810	700	760	2,400	580	500	540	5,700	3,500	2,600
C-3	12/07/94	14.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
C-3	12/07/94	15.0	640	1,700	980	920	700	820	1,300	1,200	1,300	3,600	0,850	0,880	0,530	4,400	5,300	4,100

Abbreviations
nd = Not detected, or no limit given by previous consultant.
* = Lab estimated value.

Table 4. Soil Analytic Data for Metals
- Lathrop Investigation, Emeryville, California

Sample ID	Date Sampled	Sample Depth (ft)	Arsenic	Barium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Tin	Vanadium	Zinc
			(Concentration in mg/kg or parts per million)										
LATHROP (5813-5815 Shellmound)													
Cambria, December 1994													
SB-T	12/07/94	5.5	1.1	170	44	9.0	47	94	0.9	51	18	31	590
C-3	12/07/94	5.5	5.3	550	17	4.6	1,700	400	nd	41	nd	20	370
DTSC TTLC	--	--	500	1,000	500	8,000	2,500	1,000	20	2,000	ne	2,400	5,000

Abbreviations
nd = Not detected, or no limit given by previous consultant
DTSC = Department of toxic Substance Control
TTLC = Total Limit Threshold Concentration
ne = None estabalished

Table 5. Ground Water Elevation and Analytic Data for Hydrocarbons and Volatile Organic Compounds (VOCs)
- Lathrop Investigation, Emeryville, California

Well ID	Date	Well Elev. (ft)	GW Depth ft)	GW Elev. (ft)	TPHcr	TPHg	B	T	E	X	VC	1,1 DCE	1,1 DCA	1,2 DCE	1,2 DCA	1,1,1 TCA	TCE	CA	Notes
										(Concentration in ug/l or parts per billion)								
CROLEY AND HERRING INVESTMENT (5800Christie Street)																			
MW-1	4/25/94				--	--	nd	nd	nd	nd	nd	nd	9	9	nd	nd	nd	nd	
MW-2	4/25/89	7.42			--	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
	2/20/90		4.26	3.16	--	nd	nd	0.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
MW-3	4/25/89	6.42			--	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
	2/20/90		5.42	1.00	--	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
MW-4	7/13/94				--	nd	800	280	270	300	nd	nd	nd	nd	nd	nd	nd	nd	
	10/8/93				--	2,200*	290	220	120	200	nd	nd	nd	nd	55	5	nd	nd	
	1/19/94				--	350	210	25	35	37	nd	nd	nd	nd	nd	nd	nd	nd	
EW-1	5/8/89	8.62			--	--	nd	190	nd	170	nd	78	nd	nd	nd	nd	640	nd	
	11/6/89		6.15	2.47	--	740	180	39	0.8	67	29	2.3	34	350	4.8	26	740	nd	
	2/20/90		5.93	2.69	--	12,000	1,300	3,600	7.1	47	nd	14	460	2,500	34	550	1,100	29	14 MC
	5/31/90		5.86	2.76	--	24,000	56	6,100	17	140	2,600	69	1,900	110	33	1,200	830	94	40 MC
	9/7/90		6.30	2.32	--	25,000	1,100	800	nd	42	1,700	36	1,300	2,400	53	510	490	150	22 MC
	12/4/90		7.39	2.23	--	7,400	180	3,200	nd	nd	230	nd	460	1,500	nd	72	1,500	nd	
	4/6/91		6.02	2.60	--	51,000	3,000	12,000	nd	nd	900	nd	1,800	3,700	nd	2,900	1,300	nd	
	7/3/91		6.20	2.42	--	23,000	650	8,700	nd	nd	1,990	nd	2,000	2,000	nd	200	130	170	
	10/12/91		6.50	2.12	--	39,000	nd	1,300	nd	nd	170	nd	630	620	120	470	730	54	
	1/8/92		6.20	2.42	--	nd	nd	580	nd	nd	480	nd	420	1,520	250	89	1,700	nd	
	4/8/92		--	--	--	12,000	4,000	nd	nd	nd	nd	nd	1,300	nd	2,700	nd	2,800	nd	
	7/15/92		6.10	2.52	--	100,00	nd	4,700	nd	nd	150	nd	600	600	110	420	680	nd	
	10/19/92		6.10	2.52	--	26,000	nd	12,500	nd	nd	nd	4,800	nd	nd	nd	nd	270	nd	
	1/11/93		5.50	3.12	--	20,000	nd	7,500	nd	75	nd	nd	nd	nd	nd	nd	23	nd	42 PCE
	3/29/93		5.95	2.67	--	15,000	nd	12,000	nd	nd	nd	500	nd	nd	nd	nd	2,000	nd	
	7/7/93		6.20	2.42	--	40,000	nd	3,600	nd	nd	nd	nd	1,700	nd	nd	nd	nd	nd	
	10/8/93		6.25	2.37	--	12,000	nd	11,000	nd	81	nd	nd	1,600	nd	nd	210	nd	nd	

Table continues on next page

Table 5. Ground Water Elevation and Analytic Data for Hydrocarbons and Volatile Organic Compounds (VOCs)
- Lathrop Investigation, Emeryville, California

Well ID	Date	Well Elev. (ft)	GW Depth ft)	GW Elev. (ft)	TPHcr	TPHg	B	T	E	X	VC	1,1 DCE	1,1 DCA	1,2 DCE	1,2 DCA	1,1,1 TCA	TCE	CA	Notes
										(Concentration in ug/l or parts per billion)								
	1/19/94		6.30	2.32	--	5,000	22	4,300	12	70	nd	nd	nd	nd	nd	nd	nd	nd	
C-1	12/16/94	100.0	3.82	96.18	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
C-2	12/16/94	99.22	3.33	95.89	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
C-3	12/16/94	99.24	3.82	95.42	5.1	17	1,900	120	5.1	250	nd	nd	nd	nd	nd	nd	nd	nd	
LATHROP PROPERTY																			
Sewer Water Entering Excavation																			
1,500	10/26/89				--	2,800	32	240	61	400	--	--	--	--	--	--	--	--	
Cambria Boring Grab Samples																			
SB-B	9/22/94				--	49	nd	nd	nd	nd	--	--	--	--	--	--	--	--	
SB-C	9/22/94				--	31	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.7 CF, a
SB-D	9/22/94				--	19	nd	2.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.8 CF
SB-E	9/22/94				--	38	0.78	1.2	nd	1.0	1.8	nd	nd	nd	nd	nd	nd	nd	0.7 CF
SB-G	9/22/94				--	12,000	220	6,500	78	350	190	4.0	440	22	3.6	15	640	nd	1.9 TCA,
SB-H	9/22/94				--	40,000	230	5,200	110	300	430	1.0	1,300	24	9.7	35	82	nd	0.6 TCA,
SB-K	9/22/94				--	13,000	1,000	nd	140	nd	--	--	--	--	--	--	--	--	d
SB-N	9/22/94				--	38,000	8,100	1,500	550	570	nd	nd	nd	nd	nd	nd	nd	nd	
SB-O	9/22/94				--	1,500	4.8	1.0	7.3	10	nd	nd	nd	nd	nd	nd	nd	nd	
SB-P	9/22/94				--	21,000	1,500	150	260	nd	nd	nd	54	nd	nd	nd	nd	nd	d
DTSC MCLs or State Action					--	NE	1	100	680	1,750	--	--	--	--	--	--	--	--	

Table continues on next page

Table 5. Ground Water Elevation and Analytic Data for Hydrocarbons and Volatile Organic Compounds (VOCs)
- Lathrop Investigation, Emeryville, California

Well ID	Date	Well Elev. (ft)	GW Depth ft)	GW Elev. (ft)	TPHcr	TPHg	B	T	E	X	VC	1,1 DCE	1,1 DCA	1,2 DCE	1,2 DCA	1,1,1 TCA	TCE	CA	Notes
												(Concentration in ug/l or parts per billion)							

Notes

Abbreviations

Well Elevation = Top of casing elevation with respect to onsite benchmark
GW = Ground water
LPH = Liquid-phase hydrocarbons; calculated ground water elevation corrected for LPH by the relation:
Ground Water Elevation = Well Elevation - Depth to Water + 0.8 LPH
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
B = Benzene by EPA Method 8020
E = Ethylbenzene by EPA Method 8020
T = Toluene by EPA Method 8020
X = Xylenes by EPA Method 8020
nd = Not detected, detection limit not reported by consultant
DTSC MCLs = Department of ToxicSubstances Control maximum contaminant level for drinking water
NE = Not established
VC = Vinyl chloride
1,1 DCE = 1,1 dichloroethene
1,1 DCA = 1,1 dichloroethane
1,2 DCE = Trans 1,2 dichloroethene
1,1,1 TCA = 1,1,1 trichloroethane
TCA = 1,1,2 trichloroethane
TCE = Trichloroethene
CA = Chloroethane
CF = Chloroform
PCE = Tetrachloroethene
-- = Constiuent not analyzed.

Notes

a = 0.7 ppm BDCA
b = 2, 400 cis-1,2 - dichloroethane, 0.5 tetrachlorethene, 1.9 1,1,2 - trichlorethane.
c = 830 ppm cis- 1,2 - dichlorethene.
d = the positive result has an atypical pattern for gasoline analysis.
* = BTEX do not match gasoline pattern.

Table 6. Ground Water Elevation and Analytic Data for Polynucleararomatics (PNAs)
- Lathrop Investigation, Emeryville, California

Sample ID and Depth (ft)	Date Sampled	Acenaph-thene	Acenaph-thylene	Anthra-cene	Benzo-(a)anthra-cene	Benzo-(a)pyrene	Benzo-(g,h,i) perylene	Chrysene	Fluor-anthene	Flourene	2-Methyl-naphtha-lene	Naphtha-lene	Phenan-threne	Pyrene
		(Concentrations in ug/l or parts per billion)												
LATHROP (5813-5815 Shellmound)														
Cambria, December 1994														
C-1	12/16/94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
C-2	12/16/94	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
C-3	12/16/94	150	780	37	7.2*	8.5*	7.3*	20	50	110	490	11,000	260	61

Abbreviations
nd = Not detected, or no limit given by previous consultant
* = Lab estimated value.

Table 7. Ground Water Analytic Data for Metals
- Lathrop Investigation, Emeryville, California

Well ID	Date	Cadmium	Chromium	Lead	Nickel	Tin	Vanadium	Zinc
		(Concentration in mg/kg or parts per million)						
LATHROP (5813-5815 Shellmound)								
Cambria, December 1994								
C-1	12/16/94	nd	nd	nd	nd	nd	nd	nd
C-2	12/16/94	na	na	na	na	na	na	na
C-3	12/16/94	nd	nd	nd	0.12	nd	nd	nd

Abbreviations
nd = Not detected, or no limit given by previous consultant
na = Not analyzed

5813-5815 Shellmound Street

Geotechnical Borehole Locations and Logs (WCC, 1971)

(Note: Log for Borehole 1 is missing from data provided)

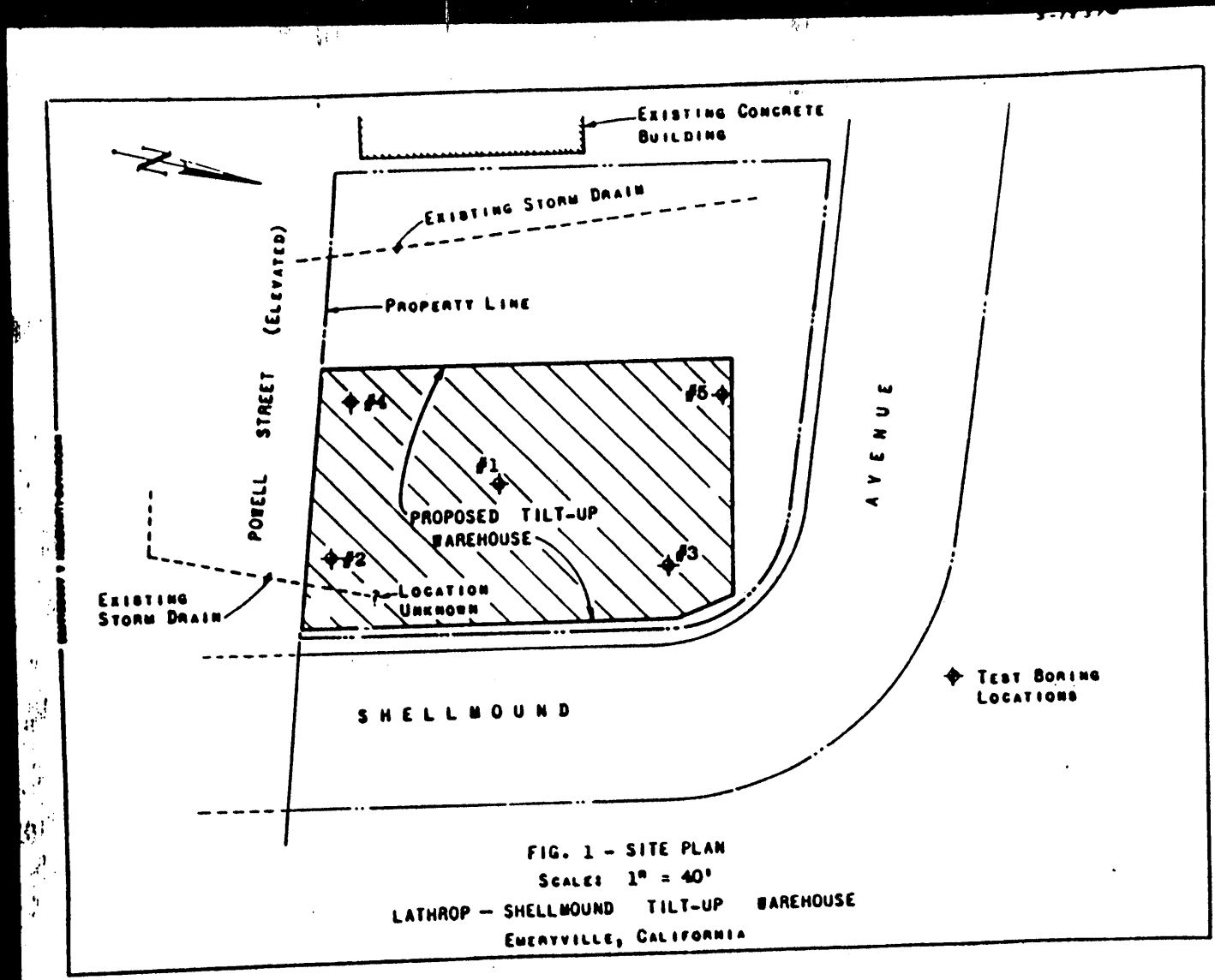


FIG. 1 - SITE PLAN

SCALE: 1" = 40'

LATHROP - SHELLMOUND TILT-UP WAREHOUSE

EMERYVILLE, CALIFORNIA

Project: LATHROP-SHELLMOUND TILT-UP WAREHOUSE

Log of Boring No. 2

Date Drilled: 6-16-71 Hammer Weight:

Type of Boring: 6" AUGER Remarks:

Depth, ft	Samples	Blows/ft	DESCRIPTION	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength, psf
			Surface Elevation			
			CLAYEY GRAVEL DENSE, DAMP, GREENISH-BROWN, BASE ROCK MOIST, DARK BROWN (FILL)			
5			BAY MUD SOFT TO MEDIUM STIFF, MOIST, BLACK ORGANIC SILTY CLAY			
			WATER AT TIME OF DRILLING (BAY MUD)			
10			GRAVELLY CLAY STIFF, BROWN			
15						
			SANDY CLAY STIFF, GRAY-BROWN, WITH GRAVEL			
20			SILTY CLAY STIFF, GRAY-BROWN, WITH SAND			
			Bottom of Hole @ 23'			
25						
30						

Job No 3-12376 WOODWARD-LUNDGREN & ASSOCIATES Figure 3

Project:
LATHROP-SHELLMOUND TILT-UP WAREHOUSE

Log of Boring No. 3

Date Drilled: 6-16-71 — Hammer Weight:
Type of Boring: 6" Auger — Remarks:

Depth, ft	Sample	Blows/ft	DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf
			Surface Elevation			
			SANDY GRAVEL: DENSE, MOIST, BROWN			
			CLAYEY SAND			
			CLAYEY GRAVEL: DENSE, MOIST, GREENISH-BROWN, (BASE COURSE MATERIAL)			
			(FILL) CLAYEY GRAVEL: MEDIUM DENSE, MOIST, REDDISH-BROWN			
5			BAY MUD SOFT, BLACK, ORGANIC SANDY SILTY CLAY			
			(BAY MUD)			
10			VERY SANDY CLAY STIFF, BROWN			
15			SANDY CLAY STIFF, BROWN			
20			SANDY SILTY CLAY STIFF, REDDISH-BROWN			
			SANDY CLAY STIFF, BROWN, WITH GRAVEL			
25			Bottom of Hole @ 23'			
			*WATER AT TIME OF DRILLING			
10						

Job No. 3-71076 — WOODWARD-LUNDGREN & ASSOCIATES — Figure 4

Project: [illegible] TILT-UP WAREHOUSE

Log of Boring No. 4

Date Drilled: 6-16-71 Hammer Weight: 140 Lbs.

Type of Boring: 8" AUGER Remarks:

Depth, ft	Samples	Blows/ft	DESCRIPTION	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength, psf
			Surface Elevation			
			CLAYEY GRAVEL DENSE, RUST-BROWN, BASE ROCK			
			SILTY CLAY MEDIUM STIFF, BLACK, WITH TRACES OF GRAVEL (FILL)			
5			BAY MUD SOFT, ORGANIC SILTY CLAY			
			WATER AT TIME OF DRILLING (BAY MUD)			
10			VERY SANDY CLAY STIFF, BROWN, WITH SAND LENSES			
			LESS SANDY			
15						
20		73	SILTY SAND DENSE, BROWN	18	112	730
25			SANDY CLAY STIFF, BROWN			
	2	27	GRAVEL LENSE	19	109	1300
30			BOTTOM OF HOLE @ 29.5'			

Job No 3-72376 WOODWARD-LUNDGREN & ASSOCIATES Figure

Project:
LATHROP-SHELLMOUND TILT-UP WAREHOUSE

Log of Boring No. 5

Date Drilled: 6-16-71 Hammer Weight:
Type of Boring: 6" AUGER Remarks:

Depth, ft	Samples	Blows/ft	DESCRIPTION	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength, psf
			Surface Elevation			
			10" CONCRETE SLAB			
			CLAYEY SAND & ROCK FRAGMENTS MEDIUM DENSE, BLUE-GREEN, BASE ROCK			
			SAND: LOOSE, MOIST, PINK, WITH BRICK CHIPS			
			CLAYEY SAND: LOOSE, MOIST, BLACK			
5			TARPAPER BLACK, MOIST, TARPAPER MIXED WITH MUD (FILL) ▽*			
			B A Y M U D SOFT, BLUE-GRAY, SILTY CLAY (BAY MUD)			
10			V E R Y S A N D Y C L A Y STIFF, BLUE-GREEN, TRACES OF GRAVEL			
15			S A N D Y C L A Y STIFF, BROWN, WITH GRAVEL LESS GRAVELLY			
20			S A N D Y C L A Y STIFF, BROWN			
			Bottom of Hole @ 23'			
25			*WATER AT TIME OF DRILLING			
30						

Job No. - WOODWARD-LUNDGREN & ASSOCIATES Figure 6

5813-5815 Shellmound Street

Workplan for Additional Assessment (Cambria, 1996)

CAMBRIA

November 7, 1996

Susan L. Hugo
Alameda County Department of Health Services
1131 Harbor Bay Parkway, Ste. 250
Alameda, CA 94502-6577

Re: **Investigation Workplan**
Lathrop Property
5813-15 Shellmound Street
Emeryville, California
Project No. 19-122

Dear Ms. Hugo:

Cambria Environmental Technology (Cambria) is submitting this work plan to complete additional site assessment tasks at the above site on behalf of Mr. F.P. Lathrop. This work plan is designed to satisfy the requests made by Alameda County Department of Health Services (ACDEH) in their September 20, 1996 letter to Mr. F.P. Lathrop. The objectives of the investigation are to: 1) determine the extent of detected contaminants along and beyond the southwestern/downgradient portion of the site and 2) implement a quarterly ground water monitoring program. To achieve these objectives Cambria recommends drilling two soil borings and installing a fourth ground water monitoring well beyond the southern edge of the property. All work will be conducted in accordance with the Tri-Regional Guidelines and pertinent state regulations including Title 23, Subchapter 16, Article 7 UST Closure Requirements. The proposed scope of work is presented below.

PROPOSED INVESTIGATION SCOPE OF WORK

Soil Borings: To determine the extent of contaminants along and beyond the southwestern portion of the site, we propose drilling 2 soil borings in the sidewalk beyond the southern edge of the property. Cambria's Standard Field Procedures are included as Attachment A. One of the borings will be drilled to a depth of 10 feet and the other will be drilled to 15 feet. One soil and one grab groundwater sample will be collected from the shallow boring and two soil samples will be collected from the deeper boring. Proposed boring locations are shown on Figure 1. If the initial work progresses smoothly and we have adequate budget, a third boring may be drilled to further define the horizontal extent of contamination.

All three soil samples and the grab ground water sample collected from the shallow boring will be analyzed for TPHg, benzene, toluene, ethyl benzene and xylenes (BTEX), TPH creosote, TPH motor oil, and TPH diesel. These analyses will be completed using EPA Methods 8015M/8020. One soil sample

CAMBRIA
ENVIRONMENTAL
TECHNOLOGY, INC.
1144 65TH STREET,
SUITE B
OAKLAND,
CA 94608
PH: (510) 420-0700
FX: (510) 420-9170

from each boring will also be analyzed for VOCs using EPA Method 8010 and SVOCs using EPA Method 8270. If a third boring is drilled, we will not expand the number of analyses performed, but will allocate a portion of our analytical budget to the third boring.

Well Installation: Cambria will install a ground water monitoring well in one of the two/three borings drilled, and will develop and survey the Top of Casing elevation of the well. Following installation of the well, a quarterly groundwater monitoring program will be implemented to confirm groundwater quality at the site. The newly installed well and three existing wells will be sampled for four quarters. The first quarterly sampling event will include analyses for TPHg, BETX, (using EPA Method 8015M/602), TPH creosote, TPH motor oil, TPH diesel (using EPA Method 8015M), VOCs (using EPA Method 601) and SVOCs (using EPA Method 8270). Subsequent quarters will not include VOC analysis. See Table 1 for a summary of the analyses to be conducted as part of this additional site assessment.

Summary: The specific tasks for this investigation will include:

1. Preparing a site safety plan and coordinating field activities;

2. Obtaining well/boring permits and an encroachment permit to drill in the sidewalk beyond the property boundary;

3. Notifying Underground Service Alert of our drilling activities to locate underground utilities at the site boundaries prior to drilling;

4. Drilling at least two soil borings (one to a depth of 10 ft. and the other to a depth of 15 ft.) and collecting soil samples for lithologic description;

5. Collecting one soil and one grab ground water sample from the shallow boring and two soil samples from the deeper boring; Analyzing samples according to the analytic schedule shown on Table 1;

7. Installing a ground water monitoring well in the 15 ft. boring;

8. Developing and surveying the Top of Casing elevation of the well;

9. Collecting ground water samples from the new and three existing wells and analyzing the samples according to the the analytic schedule shown on Table 1;

10. Grouting the 10 ft. boring; and

11. Reporting the results of the drilling and sampling in a combined site investigation and ground water monitoring report that, at a minimum, will contain:

- A summary of the site background and history;
- Descriptions of the drilling and soil sampling methods;
- Boring logs;
- Tabulated soil and ground water analytic results;
- Analytic reports and chain-of-custody forms; and
- A discussion of the analytic results.

CLOSING

We are pleased to submit this work plan on behalf of Mr. F. P. Lathrop. Please call if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

(By JPT)

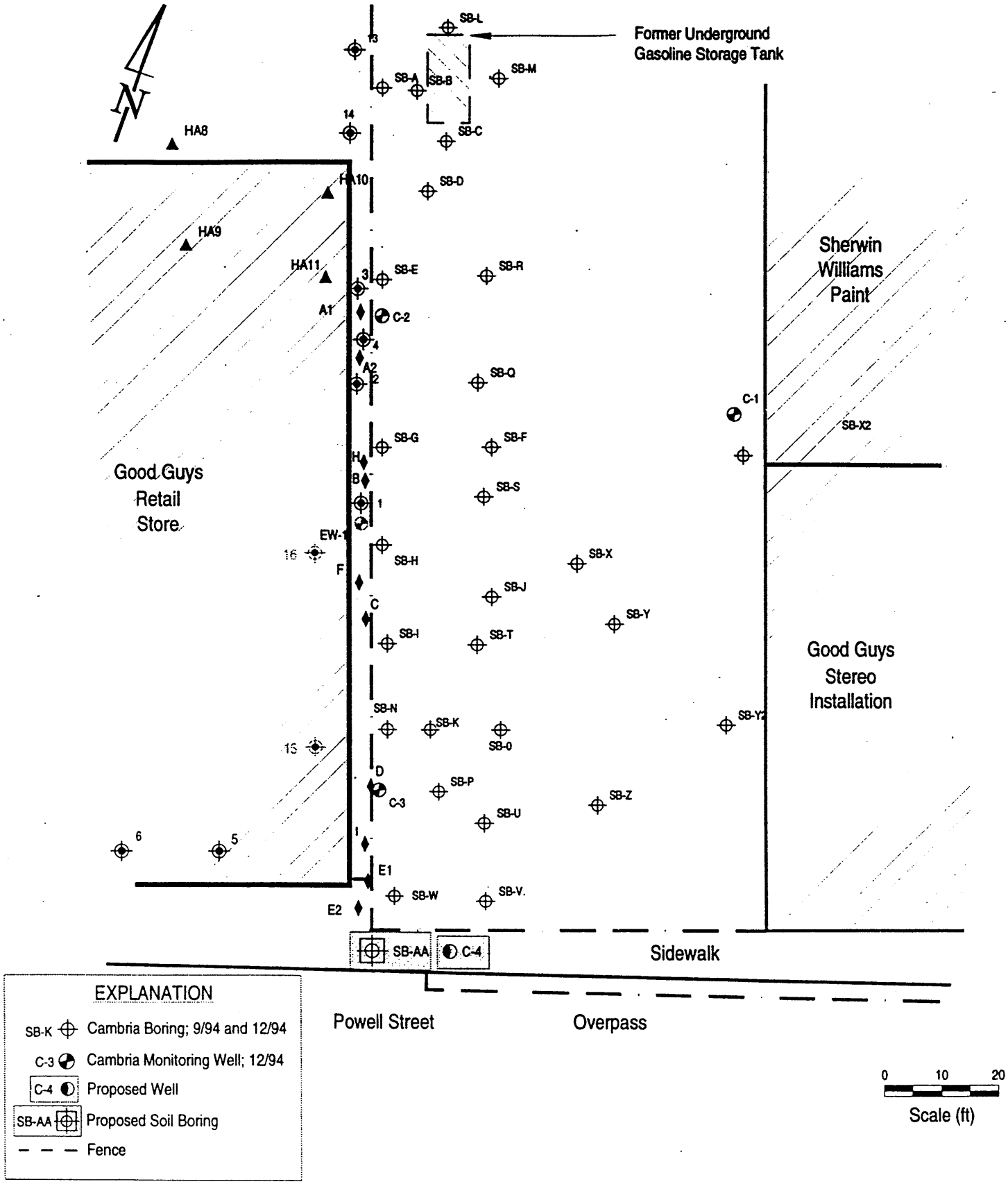
Ann M. Crum
Project Engineer

Joseph P. Theisen, C.E.G.
Principal Hydrogeologist

cc: Ms. Susan Beth Bowden; Crosby, Heafey, Roach and May
Mr. Sum Arigala; RWQCB-SFBR
Ms. Susan Hyde; Goldsmith Lathrop

F:\PROJECT\MISC\LATHROP\WORKPL2.WPD

Attachment: A - Standard Operating Procedures



CAMBRIA
Environmental Technology, Inc.

Lathrop Property
5813-15 Shellmound Street
Emeryville, CA 94608

F:\PROJECT\ARCHIVES\CROSBY\EMERYVLL\FIG1.DWG

Investigation Workplan

FIGURE
1

Table 1 - Analytic Schedule						
Analyte	Number of Analyses					
	Initial Investigation			Quarterly Monitoring		Total
	Soil	*Grab*	*Water*	*Per Episode*	*3 Episodes*	
TPHg/BETX	3	1	4	4	12	20
TPH creosote/TPH motor oil/TPH diesel	3	1	4	4	12	20
VOCs by EPA 8010	2	-	4	–	–	6
SVOCs (incl. PNAs) by EPA 8270	2	-	4	4	12	18
Total	**10**	**2**	**16**	**12**	**36**	**64**

CAMBRIA

ATTACHMENT A

Standard Operating Procedures

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling ground water monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Registered Geologist (RG) or a Certified Engineering Geologist (CEG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or push technologies such as the Geoprobe. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. PID measurements are used along with the field observations, odors, stratigraphy and ground water depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch type sampler or are collected from the open borehole using bailers. The ground water samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Ground water monitoring wells are installed to monitor ground water quality and determine the ground water elevation, flow direction and gradient. Well depths and screen lengths are based on ground water depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 ft below and 5 ft above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three ft thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two ft thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of ground water surging and extraction. Surging agitates the ground water and dislodges fine sediments from the sand pack. After about ten minutes of surging, ground water is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of ground water are extracted and the sediment volume in the ground water is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

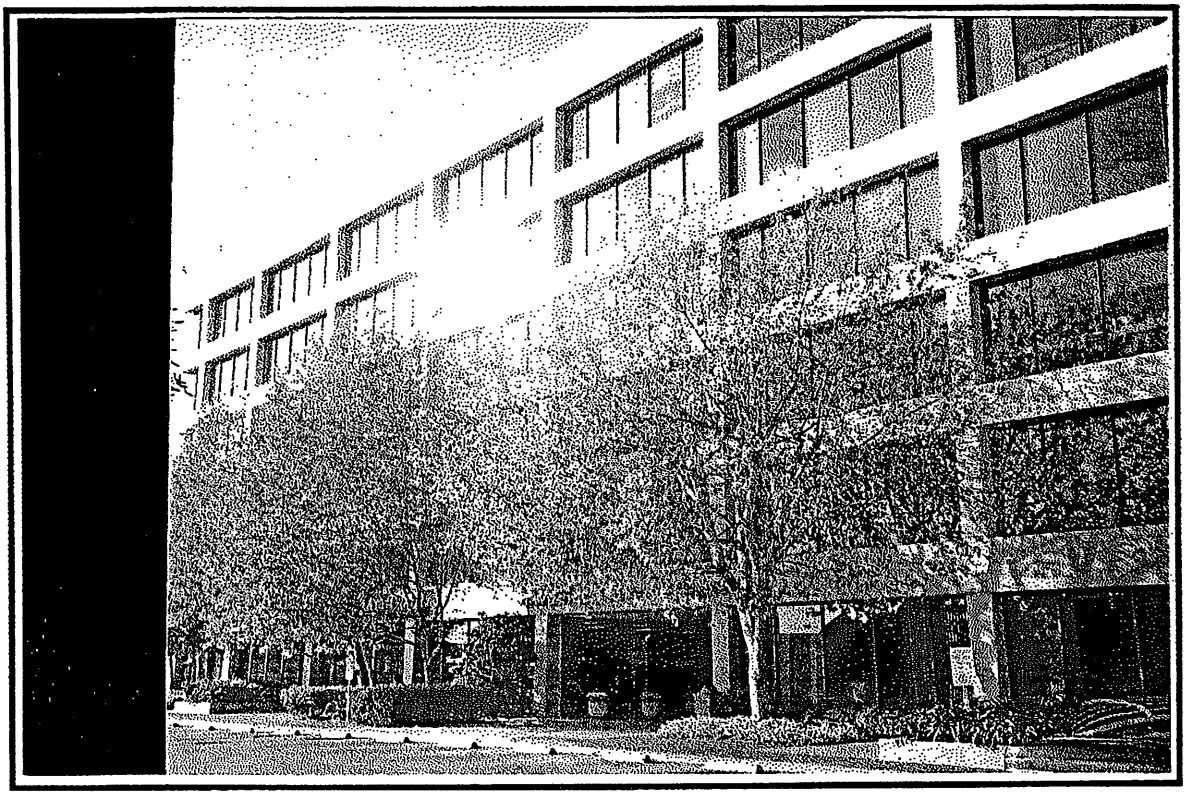
Ground Water Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of ground water are purged prior to sampling. Purging continues until ground water pH, conductivity, and temperature have stabilized. Ground water samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

APPENDIX C

5801 Christie Avenue Photographs
List of Tenants from City Directory

5801 Christie Avenue Photographs



View southwest toward Powell Street and Highway 80 ofthe Bay Bridge Plaza Building. Asphalt parking area is on the left side of photograph.

SITE PHOTOGRAPH

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates

5801 Christie Avenue
List of Tenants from City Directory

Polk and Haines City Directory Listings for 5801 Christie Avenue

1967: No listing for this address
1969: No listing for this address
1973: Miscellaneous tenants including Lathrop Construction
1978: Bay Bridge Office Park, (miscellaneous tenants)
1986: Miscellaneous tenants including First Interstate Bank, The Computer Works.
1994: Miscellaneous tenants including Myers Container Corp., First Interstate et al.

APPENDIX D

5855-5895 Christie Avenue Photographs and List of Tenants from City Directory

5855-5895 Christie Avenue Photographs

1. View west of subject building. Note Water Tower Complex in background. Bay Bridge Plaza is off left side of photograph.

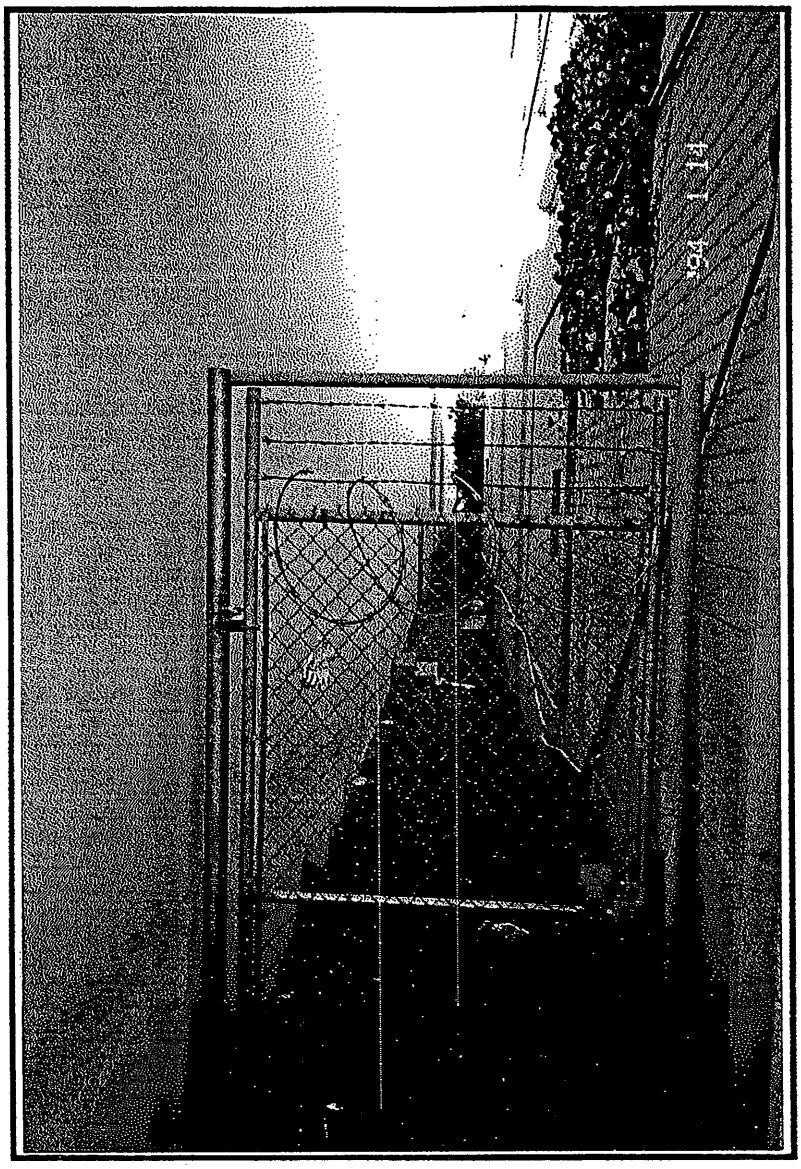
2. View of east portion of subject building.

SITE PHOTOGRAPHS

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 983-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates



3. View of alleyway along north side of subject building (on left).

SITE PHOTOGRAPH

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates

5855-5895 Christie Avenue
List of Tenants from City Directory

Polk and Haines City Directory Listings for 5855-5895 Christie Avenue

1967: No listings for subject addresses

1969: 5865: Nixon Elgi Equipment Company
5890: Enterprise Commercial Office Supplies
5895: Vacant

1973: 5855: Medi Physics Inc. (later in 5801 Christie Avenue)
5859: Imparts Corp., Oanag Corp.
5861: Durametallic Sales and Serce (PK Machie, Rex Engr. Co.)
5865: Durable Tile
5890: Enterprise Commercial Co.
5895: Bearing Engineering

1978: 5855: Vacant
5859: Vacant
5861: Victor Balata
5865: Durable Tile
5890: Christie Constructors
5892: Tire Systems Inc.
5895: Bearing Engineering

1986: 5890: Christie Constructors
5892: Tire Systems
5895: Bearing Engineering

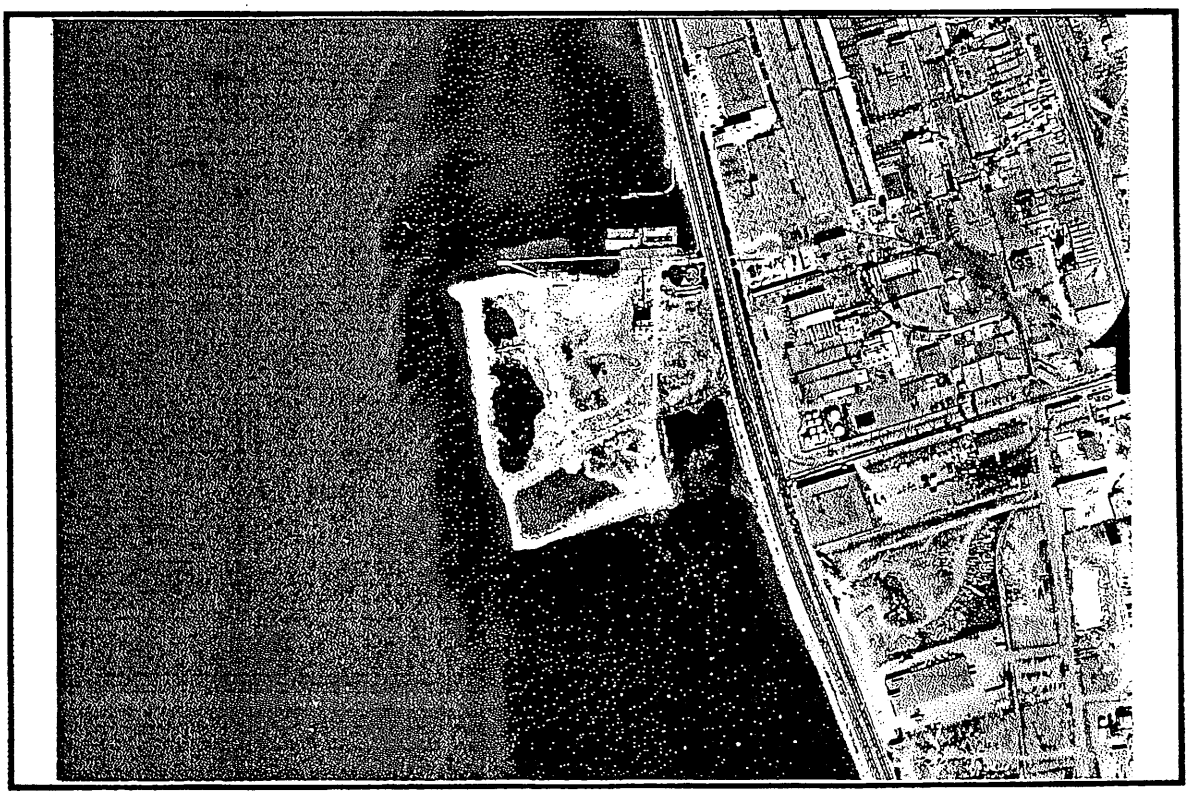
1994: 5855: Roche Professional Service Center
5857: Minuteman Press
5859: Vacant
5861: Bearing Engineering
5865: Vacant
5867: Vacant
5890: Tom Tom
5892: Grand Slam USA
5895: Vacant

APPENDIX E

Watergate Towers Aerial Photographs
Borehole Logs
and
Chemical Analysis Data

Watergate Towers Aerial Photographs

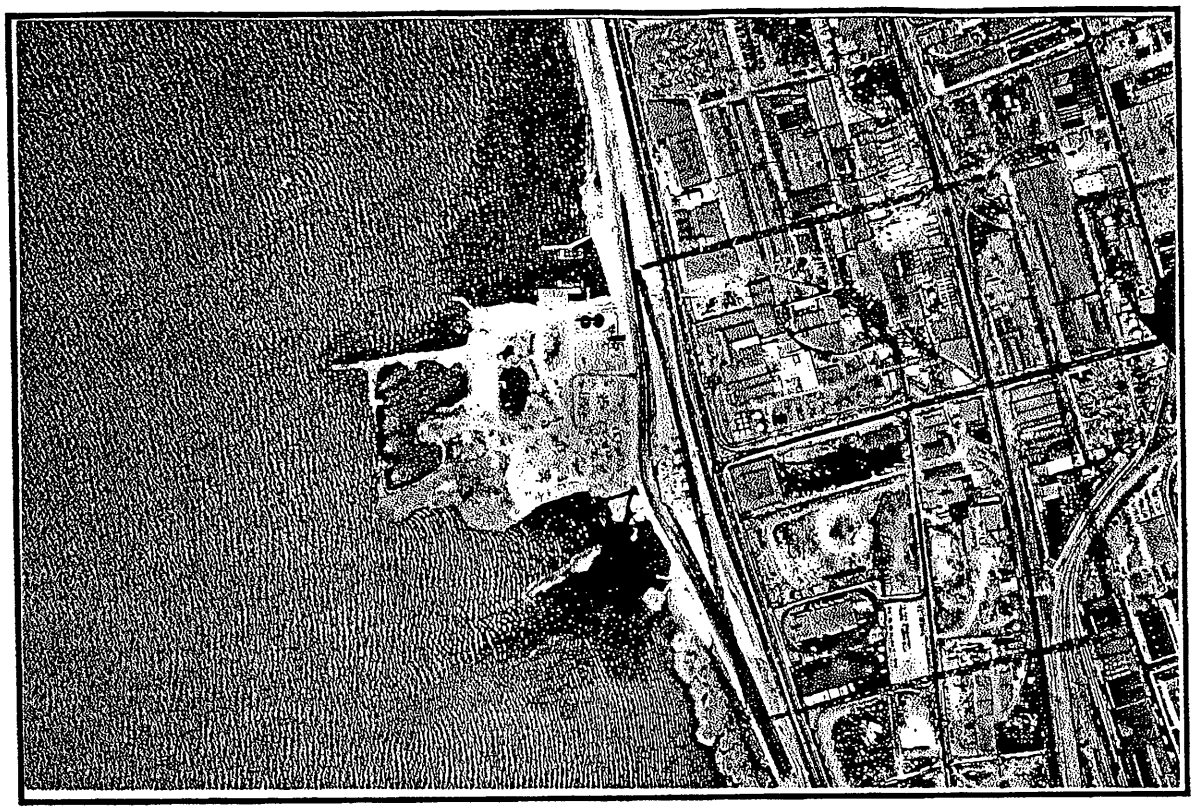
1). Aerial photograph - March 24, 1947 (Scale 1:20,000).



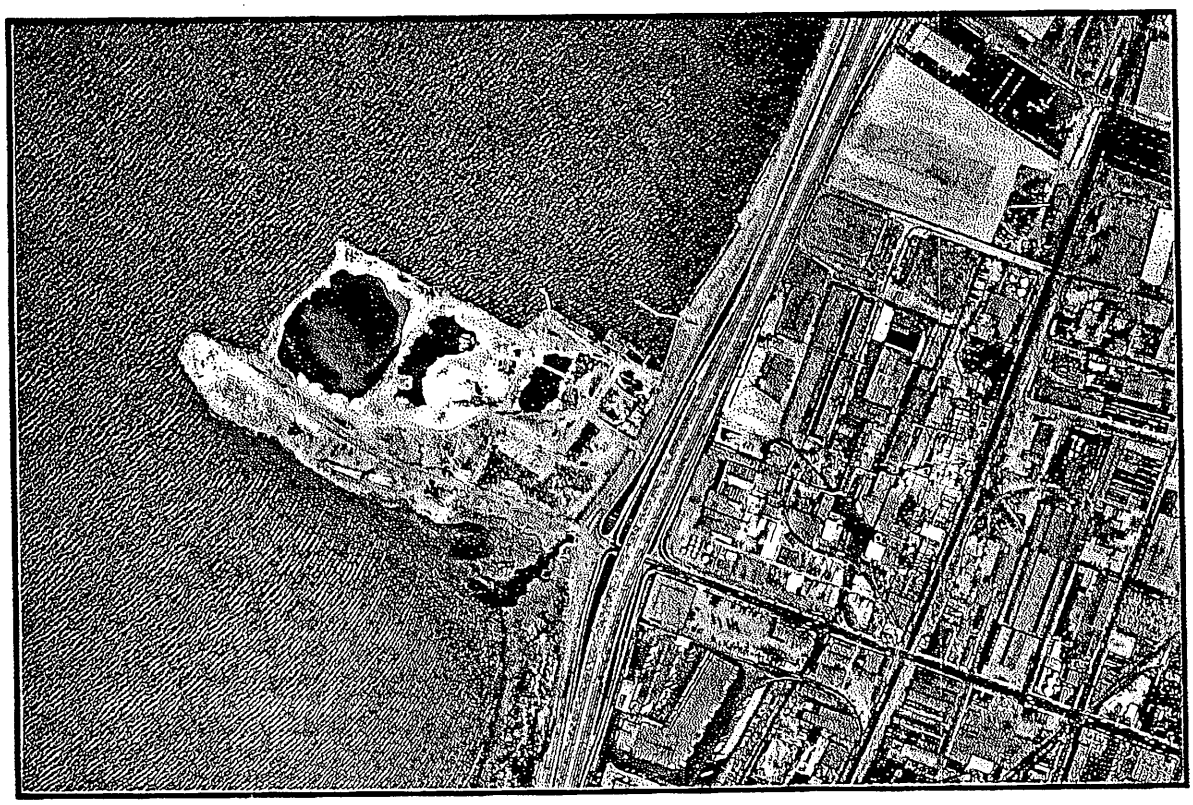
2). Aerial photograph - September 16, 1949 (Scale 1:7,200).

AERIAL PHOTOGRAPHS

SPIEKER PROPERTIES/EMERYVILLE/CA



3). Aerial photograph - August 14, 1953 (Scale 1:10,000).



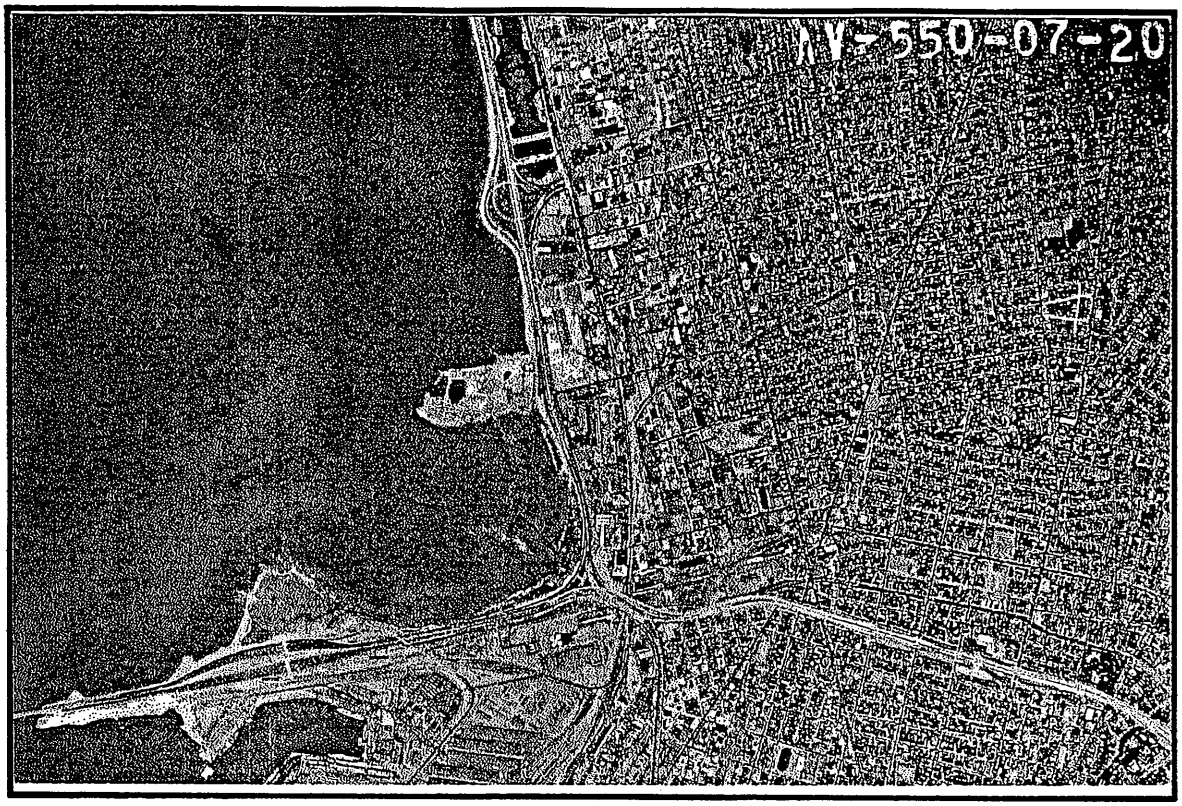
4). Aerial photograph - July 3, 1959 (Scale 1:9,600).

AERIAL PHOTOGRAPHS

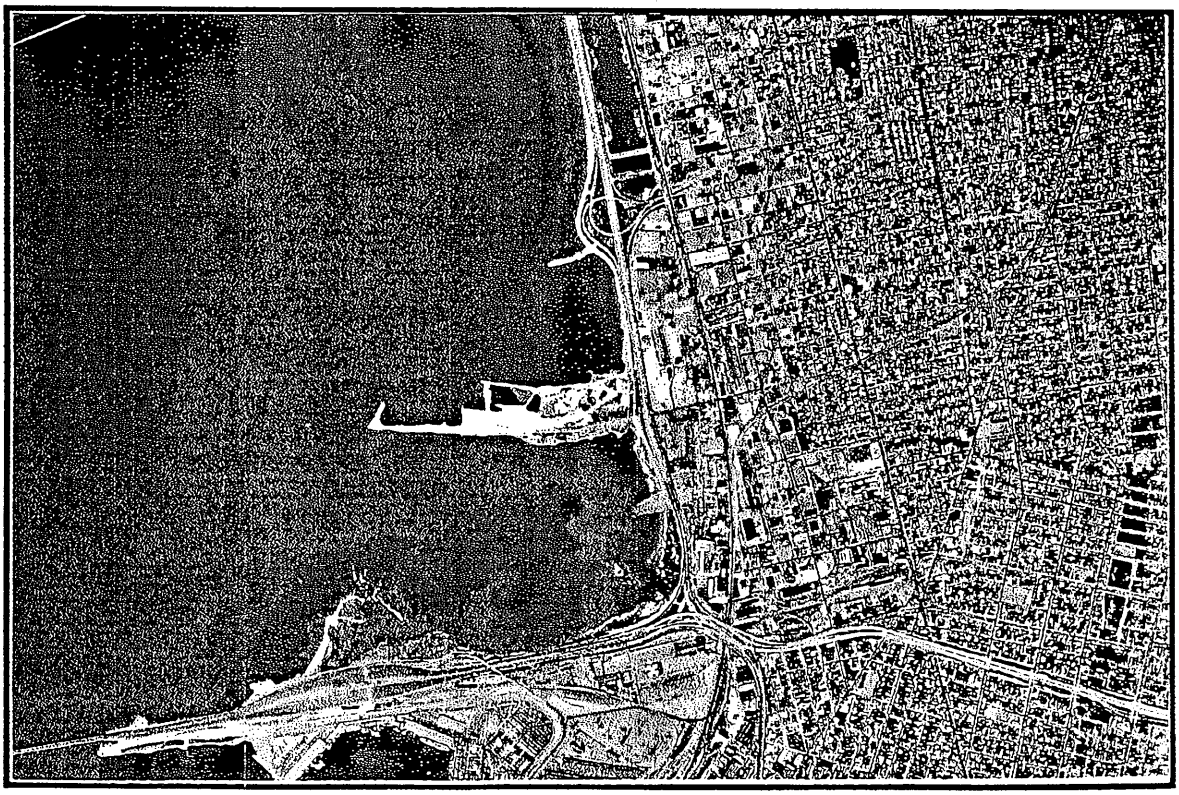
SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates



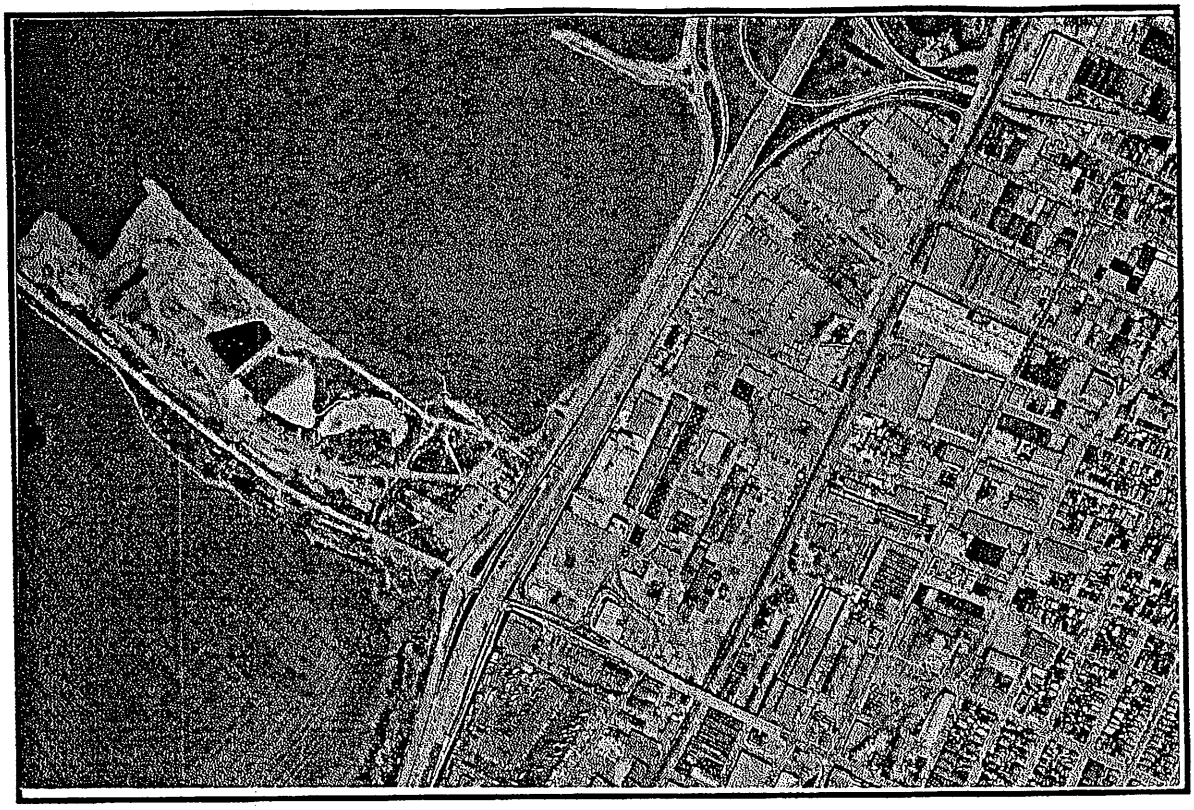
5). Aerial photograph - July 25, 1963 (Scale 1:36,000).



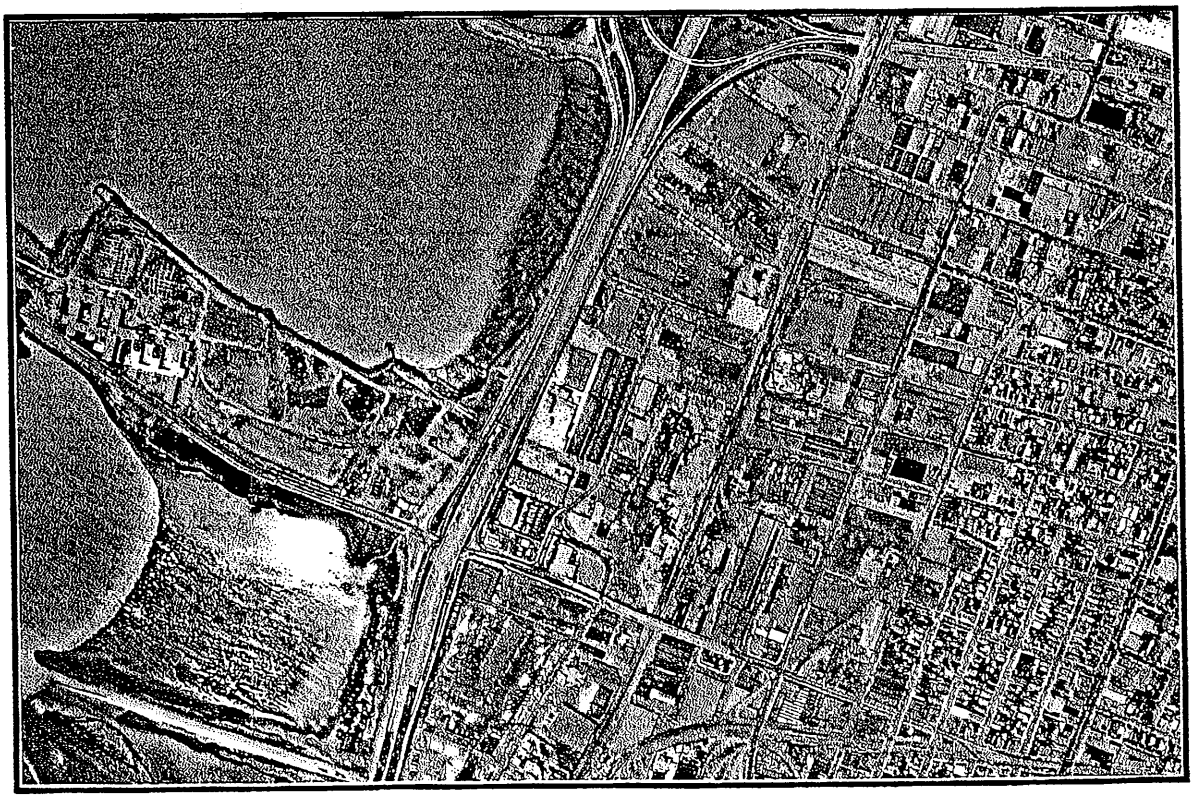
6). Aerial photograph - April 20, 1966 (Scale 1:36,000).

AERIAL PHOTOGRAPHS

SPIEKER PROPERTIES/EMERYVILLE/CA



7). Aerial photograph - May 2, 1969 (Scale 1:12,000).



8). Aerial photograph - May 19, 1971 (Scale 1:12,000).

AERIAL PHOTOGRAPHS

SPIEKER PROPERTIES/EMERYVILLE/CA

PROJECT NO: 963-7137 DWG. NO. PHOTO DRAWN BY: DVR CHECK BY: DLS DATE: 7/21/97

Golder Associates

Watergate Towers

Borehole Logs and Monitoring Well Installations (WCC, 1989)

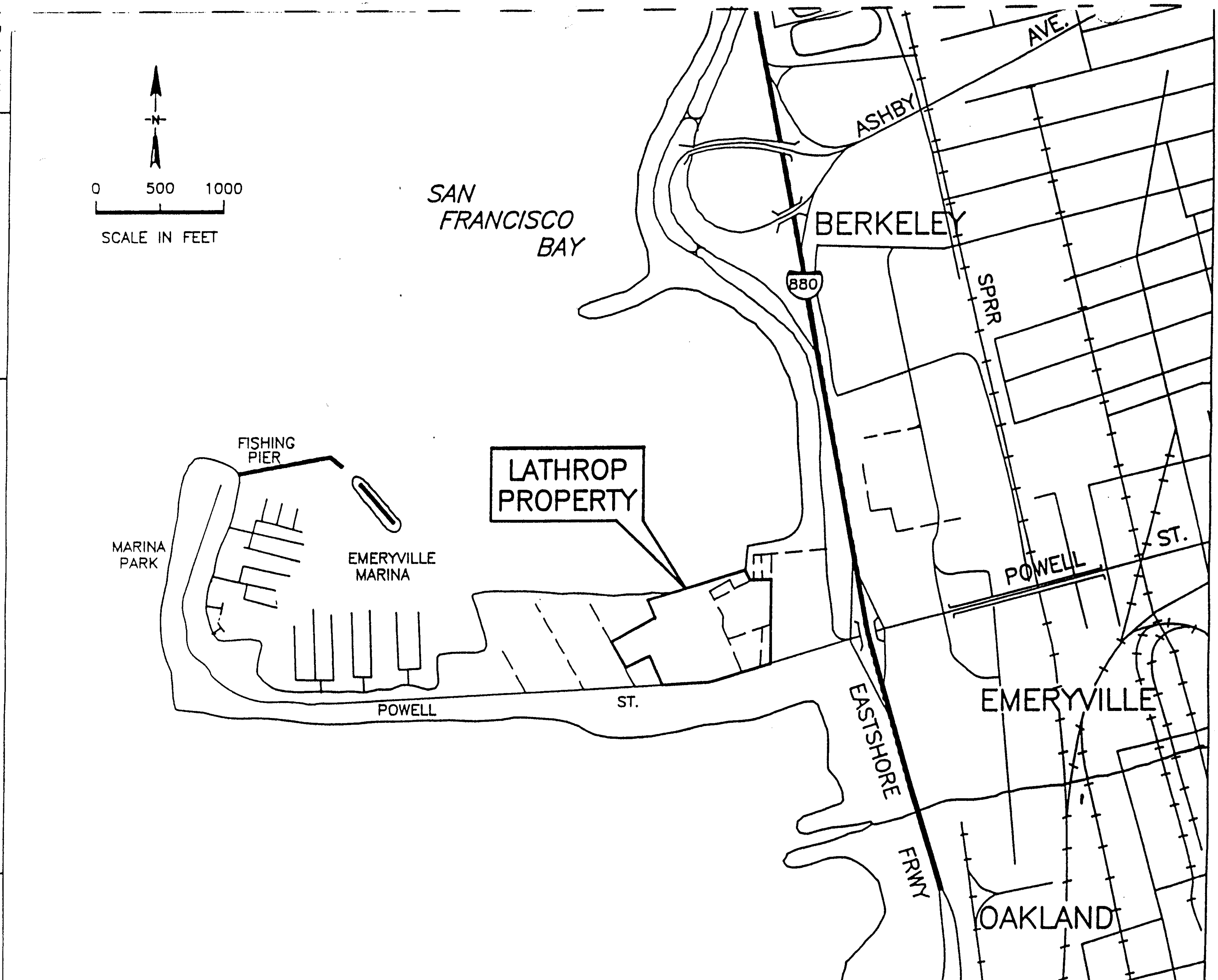
Woodward-Clyde Consultants

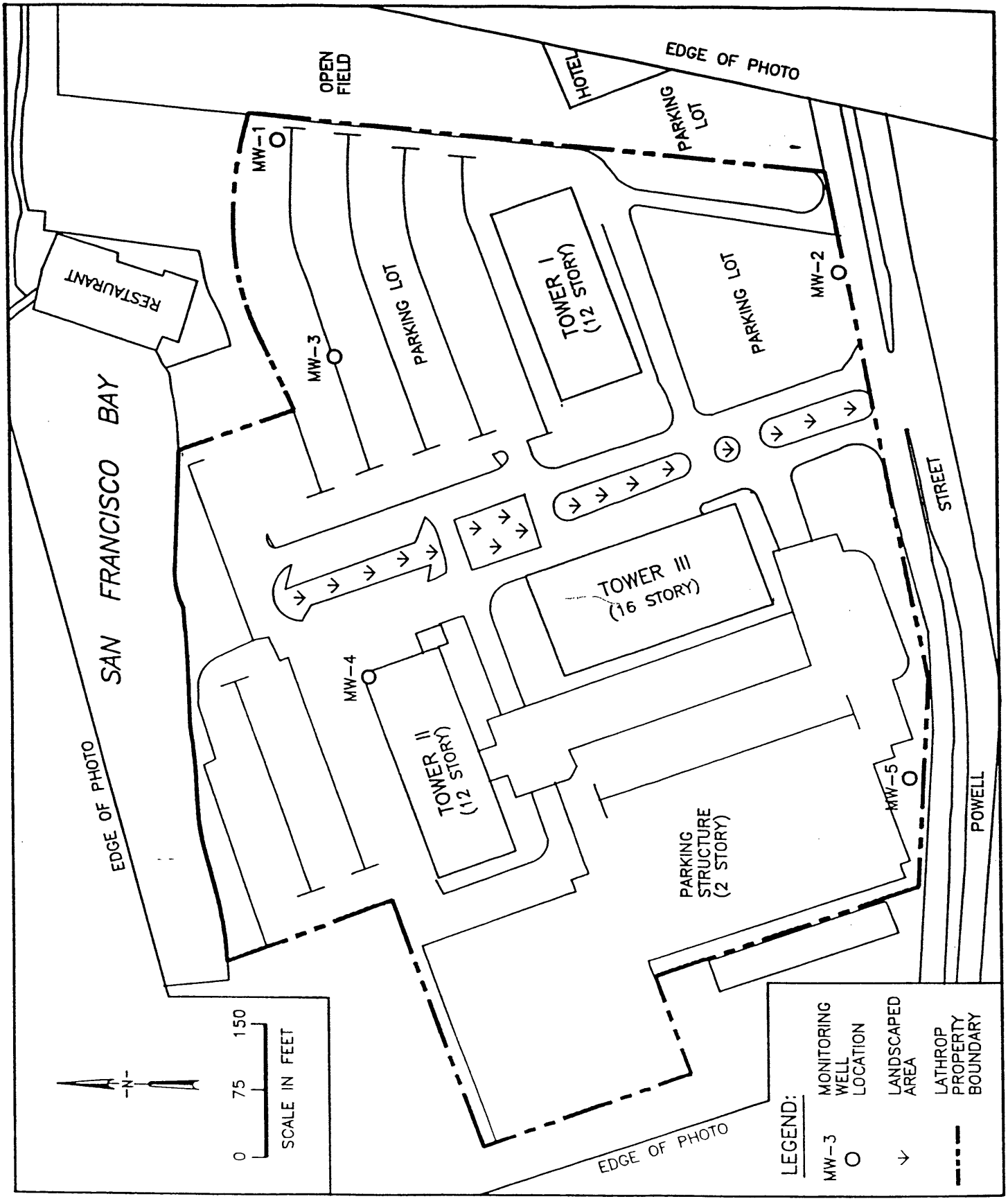
Project No. 8810235A

LATHROP PROPERTY
ENVIRONMENTAL ASSESSMENT

PROJECT SITE MAP

Figure 1





Project No. 8810235A	LATHROP PROPERTY ENVIRONMENTAL ASSESSMENT	MONITORING WELL LOCATIONS PHOTO DATE: 4-5-1985	Figure 2
Woodward-Clyde Consultants			

APPENDIX A
GEOLOGIC LOGS OF BOREHOLES

Woodward-Clyde Consultants PROJECT NAME: Lathrop Property NO. 8810235A

BORING LOCATION: MW-2			ELEVATION AND DATUM:
DRILLING AGENCY: Datum Exploration	DRILLER: Jim / Gary		DATE STARTED / DATE FINISHED: January 12,1989
DRILLING EQUIPMENT: CME - 75			COMPLETION DEPTH: 25' / SAMPLER: 2"California Modified Type
DRILLING METHOD: 8" Hollowstem Augers	DRILL BIT: CME Carbide		NO. OF SAMPLES / DIST.: N/A / UNDIST.: N/A
SIZE AND TYPE OF CASING: 2" PVC			WATER LEVEL / FIRST: 10.5' / COMPL.: N/A / 24 HRS.: N/A
TYPE OF PERFORATION: 0.010" Slotted	FROM 5 TO 25 FT.		LOGGED BY: Chuck Rambo
SIZE AND TYPE OF PACK: Lonestar #2/12 Monterey Sand	FROM 4 TO 25 FT.		CHECKED BY: Alan Lattanner
TYPE OF SEAL: NO. 1 Bentonite Pellets	FROM 2.5 TO 4 FT.		
NO. 2 Neat Cement	FROM 0 TO 2.5 FT.		

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology / Piezometer Installation	Water Content	Piezometer Data	SAMPLES: Drive Number / Sample Number / Recov. (Feet.) / Blow Count	REMARKS (Drill Rate, Fluid Loss, Odor, etc.)
0	FILL - SILTY SAND (SM) -with clay -with gray gravel -brown -moist				1: 1,2,3,4 / 4,5,8	OVA = 0 ppm
5	FILL - SILTY CLAY (CL) -with sand lenses -black				2: 1,2,3,4 / 12,16,9	OVA = 8 ppm from the drum of cuttings Petroleum Odor from the drums
10	-with concrete and wood debris		1/16/89		3: 3,4 / 8,4,7	
15	-with roofing paper, asphalt shingles, and wood debris				4: 1,2,3,4 / 14,15,10	OVA = 50 ppm from the drum of cuttings
20	SILTY CLAY (CH) -dark gray -moist -very soft				5: 1,2,3,4 / 1,2,3	OVA = 0 ppm
25	Bottom of boring at 25'					
30						
35						

Woodward-Clyde Consultants — PROJECT NAME: Lathrop Property — NO. 8810235A

BORING LOCATION: MW-3			ELEVATION AND DATUM:
DRILLING AGENCY: Datum Exploration	DRILLER: Jim / Gary		DATE STARTED / DATE FINISHED: January 13,1989
DRILLING EQUIPMENT: CME - 75			COMPLETION DEPTH: 21 1/2' — SAMPLER: 2"California Modified Type
DRILLING METHOD: 8" Hollowstem Augers	DRILL BIT: CME Carbide		NO. OF SAMPLES: — DIST.: N/A — UNDIST.: N/A
SIZE AND TYPE OF CASING: 2" PVC			WATER LEVEL: FIRST 12' — COMPL.: N/A — 24 HRS.: N/A
TYPE OF PERFORATION: 0.010" Slotted	FROM 5 TO 21.5 FT.		LOGGED BY: Chuck Rambo — CHECKED BY: Alan Lattanner
SIZE AND TYPE OF PACK: Lonestar #2/12 Monterey Sand	FROM 4 TO 21.5 FT.		
TYPE OF SEAL — NO. 1: Bentonite Pellets	FROM 2.5 TO 4 FT.		
TYPE OF SEAL — NO. 2: Neat Cement	FROM 0 TO 2.5 FT.		

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: Piezometer Installation	Water Content	Piezometer Data	SAMPLES: Drive Number	SAMPLES: Sample Number	SAMPLES: Recov. (Feet.)	SAMPLES: Blow Counts	REMARKS (Drill Rate, Fluid Loss, Odor, etc.)
5	FILL - SILTY CLAY (CL) -brown -moist -with sand -dark gray				1/18/89	1	1 2 3 4		3 9 18	OVA = 0 ppm
10	FILL - ASBESTOS (FIBERGLASS?) -pink and white fibers -very soft					2	1 2 3 4		2 1 1	OVA = 9 ppm No Odor
15	SILTY CLAY (CL) -dark gray -moist -very soft -with shells -"Bay Mud"					3	2 3 4		8 1 1	OVA = 2 ppm
20						4	2 3 4		2 3 3	OVA = 0 ppm
25	Bottom of boring at 21 1/2'									
30										
35										

Woodward-Clyde Consultants PROJECT NAME: Lathrop Property NO. 8810235A

BORING LOCATION	MW-4	ELEVATION AND DATUM	
DRILLING AGENCY	Datum Exploration	DRILLER Jim / Gary	DATE STARTED / DATE FINISHED January 13,1989
DRILLING EQUIPMENT	CME - 75	COMPLETION DEPTH 26.5'	SAMPLER 2"California Modified Type
DRILLING METHOD	8" Hollowstem Augers	DRILL BIT CME Carbide	NO. OF SAMPLES / DIST. N/A / UNDIST. N/A
SIZE AND TYPE OF CASING	2" PVC	WATER LEVEL / FIRST 8 1/2'	COMPL. N/A / 24 HRS. N/A
TYPE OF PERFORATION	0.010" Slotted	FROM 10 TO 25 FT.	LOGGED BY: Chuck Rambo
SIZE AND TYPE OF PACK	Lonestar #2/12 Monterey Sand	FROM 8 TO 25 FT.	CHECKED BY: Alan Lattanner
TYPE OF SEAL NO. 1	Bentonite Pellets	FROM 6 TO 8 FT.	
TYPE OF SEAL NO. 2	Neat Cement	FROM 0 TO 6 FT.	

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology	GRAPHIC LOG: Piezometer Installation	Water Content	Piezometer Data	SAMPLES: Drive Number	SAMPLES: Sample Number	SAMPLES: Recov. (Feet.)	SAMPLES: Blow Counts	REMARKS (Drill Rate, Fluid Loss, Odor, etc.)
0	FILL - SANDY CLAY (CL) -black -moist									
	FILL - SILTY CLAY (CL) -with sand -light gray -with debris					1	1, 2, 3, 4		3, 4, 6	
5					5	2	3, 4		6, 8, 7	
	-with roofing shingles									
10				1/18/89	10	3	1, 2, 3, 4		9, 5, 8	
15	FILL - LINOLEUM & TAR PAPER -with asphalt				15	4	4		50/6"	
20	-with wood and fiberglass shingles				20	5	3, 4		50, 40	
25	SILTY CLAY (CL) -dark gray -moist -very soft -with shells -"Bay Mud"				25	6	1, 2, 3, 4		1, 1, 1	
30	Bottom of boring at 27'				30					
35					35					

FIELD LOG OF BORING NO. MW-4 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME: Lathrop Property NO. 8810235A

BORING LOCATION	MW-5	ELEVATION AND DATUM	
DRILLING AGENCY	Datum Exploration	DRILLER Jim / Gary	DATE STARTED / DATE FINISHED January 16,1989
DRILLING EQUIPMENT	CME - 75	COMPLETION DEPTH 25'	SAMPLER 2"California Modified Type
DRILLING METHOD	8" Hollowstem Augers	DRILL BIT CME Carbide	NO. OF SAMPLES DIST. N/A / UNDIST. N/A
SIZE AND TYPE OF CASING	2" PVC		WATER LEVEL FIRST 9' to 10' / COMPL. N/A / 24 HRS. N/A
TYPE OF PERFORATION	0.010" Slotted	FROM 5 TO 25 Ft.	LOGGED BY: Carl Parten
SIZE AND TYPE OF PACK	Lonestar #2/12 Monterey Sand	FROM 4 TO 25 Ft.	CHECKED BY: Alan Lattanner
TYPE OF SEAL NO. 1	Bentonite Pellets	FROM 1 TO 4 Ft.	
TYPE OF SEAL NO. 2	Neat Cement	FROM 0 TO 1 Ft.	

DEPTH (feet)	DESCRIPTION	GRAPHIC LOG: Lithology / Piezometer Installation	Water Content	Piezometer Data	SAMPLES: Drive Number / Sample Number / Recov. (Feet.) / Blow Counts	REMARKS (Drill Rate, Fluid Loss, Odor, etc.)
0	FILL - SILTY CLAY (CH) -gray -damp -medium stiff					
5	FILL - CLAYEY SAND (SC) -gray -well sorted -damp -medium dense				1 / 2,3,4 / 8, 6, 7	OVA = 1000+ ppm Slight Sour Odor
	-moist		1/18/89			OVA Readings while drilling 500 - 900 ppm
10	FILL - CLAYEY SAND (SC) -gray -wet -loose -with sandstone fragments to 1"				2 / 4 / 5, 5, 8	No recovery Redrove with Standard Pen. Sampler
15	FILL - CLAYEY SAND (SC) to SANDY CLAY (CL) -the majority of the sample consists of tar paper and roofing scraps				3 / 2,3,4 / 8, 18, 40	OVA = 20 to 30 ppm Hydrocarbon Odor
20	SILTY CLAY (CH) -gray to black -wet -soft -"Bay Mud"				4 / 1,2,3,4 / 15, 15, 1	OVA = 50 to 100 ppm Hydrocarbon Odor
25	Bottom of boring at 25'					
30						
35						

Watergate Towers
Chemical Analysis Results
(WCC, 1989)

Table 1. SUMMARY OF TESTS RUN

Analytical Method	Target Constituent	Soil	Water
AAS/ICP	Title 22 Metals + Chromium VI	X	X
EPA 8080/608	Organochlorine Pesticides	X	X
EPA 8240/624	Volatile Organics	X	X
EPA 8270/625	Semi-Volatile Organics	X	X
EPA 5020/8020/8015 and EPA 5030/602/8015	Low & Med. BP TPH with BTXE	X	X
EPA 3550/8015 and EPA 3510/8015	High BP TPH	X	X
EPA 3550/3510	Total Recoverable Oil & Grease	X	X

BP - Boiling Point
TPH - Total Petroleum Hydrocarbons
EPA - Environmental Protection Agency
BTXE - Benzene, Toluene, Xylene and Ethylbenzene
AAS/ICP - Atomic Absorption Spectroscopy/Induction Coupled Plasma detection

Table 2. SOIL ANALYSIS: FUEL AND LUBRICANT DERIVATIVES DETECTED [1,2]

Constituent ppm)	MW-1	MW-2	MW-3	MW-4	MW-5	DL in a Solid[3]	LUFT Manual[4]
Benzene	0.14	0.26	--	0.10	--	0.700	0.3
Toluene	7.00	0.48	--	0.72	--	100	0.3
Xylenes	86.00	7.20	--	1.60	--	620	0.3
Ethylbenzene	6.60	0.50	--	0.14	--	29	0.3
TPH - Low BP	1,100	44	--	3	--	--	10
TPH - High BP	1,500	170	12	89	27	--	100[5]
Oil & Grease	9,000	40,000	12	21,000	11,000	--	--

[1] All soil tests were run on composite samples prepared by combining all soil samples from each well into a single sample for analysis.

[2] Blank cells (-) indicate constituent was not detected.

[3] Designated Level for a Hypothetical "Average" Site to Protect Groundwater: In a Solid (Marshack, 1987)

[4] Leaking Underground Fuel Tank Field Manual, "Leaching Potential Analysis for Gasoline"; State Water Resources Control Board, 1987.

[5] ibid., "for Diesel."

Table 3. SOIL ANALYSIS: OTHER ORGANIC CONSTITUENTS DETECTED[1,2]

Constituent (ppm)	MW-1	MW-2	MW-3	MW-4	MW-5	DL in a Solid
Organics						
2-Methylnaphthalene	7.3	--	--	--	--	--
Fluoranthene	8.0	--	0.16	--	--	42[3]
Naphthalene	76.0	13.0	--	--	--	620[4]
Polynuclear Aromatics (PNA's)						
Benzo(a)anthracene	--	--	0.13			
Benzo(a)pyrene	--	--	0.25	--	--	
Benzo(b)fluoranthene	--	--	0.40	--	--	
Benzo(g,h,i)perylene	--	--	0.30	--	--	
Chrysene	--	--	0.12	--	--	
Indeno(1,2,3-cd)pyrene	--	--	0.43	--	--	
Phenathrene	17.0	--	--	--	--	
Pyrene	13.0	--	0.38	--	--	
Total PNA's[5]	30.0	--	2.01	--	--	.0028[3]

1 Only constituents that were detected are shown. For a complete list of laboratory results see Appendices B and C, Laboratory Analysis Reports.

2 Blank cells (-) indicate constituent was not detected.

3 Designated Level for a Hypothetical "Average" Site to Protect Groundwater: Total in a Solid (Marshack, 1987)

4 Designated Level for a Hypothetical "Average" Site to Protect Surface Waters: Total in a Solid (Marshack, 1987)

5 Criteria are given for sum of PNAs.

Table 4. SOIL ANALYSIS: INORGANIC CONSTITUENTS DETECTED[1]

Constituent (ppm)	MW-1	MW-2	MW-3	MW-4	MW-5	STLC[2]	TTLC[3]
Arsenic	2.20	0.96	4.80	0.69	1.10	5	500
Barium	210.00	160.00	43.00	67.00	56.00	100	10,000
Beryllium	0.30	0.28	0.25	0.15	0.15	0.65	75
Cadmium	1.10	0.47	0.69	0.45	0.34	1	100
Chromium III	120.00	43.00	32.00	27.00	25.00	560	2,500
Cobalt	6.70	5.60	5.70	3.90	7.20	80	8,000
Copper	40.00	59.00	43.00	53.00	62.00	25	2,500
Lead	550.00	100.00	82.00	350.00	21.00	5	1,000
Mercury	0.33	0.14	0.13	0.16	0.13	0.2	20
Molybdenum	2.10	0.76	0.65	1.30	0.83	350	3,500
Nickel	30.00	36.00	22.00	25.00	42.00	20	2,000
Selenium	0.17	0.22	0.14	0.33	0.19	1	100
Silver	0.18	0.15	0.44	0.56	0.45	5	500
Vanadium	19.00	31.00	21.00	30.00	56.00	24	2,400
Zinc	550.00	670.00	130.00	79.00	130.00	250	5,000

[1] Only constituents that were detected are shown. For a complete list of laboratory results see Appendices B and C, Laboratory Analysis Reports.

[2] Soluble Threshold Limit Concentration

[3] Total Threshold Limit Concentration

Table 5. SOIL ANALYSIS: WASTE EXTRACTION TEST RESULTS[1,2,3]

Constituent (ppm)	MW-1	Rerun[4] MW-1	MW-2	MW-3	MW-4	MW-5	STLC[5]	DL Extractable from a Solid[6]
Barium	3.80	0.054	3.50	--	--	--	100	10
Cadmium	0.54	--	--	--	--	--	1	0.1
Copper	0.071	0.099	3.50	0.95	1.70	5.30	25	20
Lead	0.27	0.36	3.40	4.00	6.50	0.94	5	0.5
Mercury	0.0013	--	--	--	--	--	0.2	0.02
Nickel	1.30	0.053	0.63	0.81	0.57	0.96	20	.134
Vanadium	--	--	0.64	--	0.68	0.56	24	--
Zinc	3.80	0.064	20.00	--	--	--	250	200

1 Waste extraction test was run only on samples where the constituent concentration in soil was equal to or greater than the, soluble threshold limit concentration.

2 Only constituents that were detected are shown. For a complete list of laboratory results see Appendices B and C, Laboratory Analysis Reports.

3 Blank cells (-) indicate constituent was not detected.

4 The waste extraction test was rerun on a fresh soil sample from MW-1 using deionized water.

5 Soluble Threshold Limit Concentration

6 Designated Level for a Hypothetical "Average" Site to Protect Groundwater: Extractable from a Solid (Marshack 1987)

Table 6. WATER ANALYSIS: FUEL AND LUBRICANT DERIVATIVES DETECTED[1,2,3]

Constituent (ppb)	MW-1	MW-2	MW-3	MW-4	MW-5	Primary MCL[4]	DHS Action Levels, Toxicity[5]
Benzene	4	4.9	--	3.7	--	1	0.7
Toluene	430	0.6	--	9.6	1.1	--	100
Xylenes	170	0.9	0.6	9.6	2.3	1750	620
Ethylbenzene	11	--	--	1.9	--	680	680
TPH - Low BP	2,500	67	--	120	--	--	--
TPH - High BP	290	--	540	540	270	--	--
Oil & Grease	1,400	--	--	3,500	--	--	--

[1] Only constituents that were detected are shown. For a complete list of laboratory results see Appendices B and C, Laboratory Analysis Reports.

BTXE tested by both EPA 8240 and EPA 8015/8020: highest result shown.

[3] Blank cells (-) indicate constituent was not detected.

[4] Water Quality Goals, Human Health and Welfare, State or EPA Drinking Water Standards, Maximum Contaminant Levels (MCLs).

[5] Department of Health Services (DHS)

Table 7. WATER ANALYSIS: OTHER ORGANIC CONSTITUENTS DETECTED[1,2]

Constituent (ppb)	MW-1	MW-2	MW-3	MW-4	MW-5	Primary MCC[4]	DHS Action Levels, Toxicity[5]
Organics							
Acetone	280	20	--	24	28	--	--
Benzoic Acid	510	--	--	--	--	--	--
Benzyl Alcohol	6	--	--	--	--	--	--
2-Butanone	55	--	--	--	--	--	--
2-Hexanone	2,800	--	--	--	--	--	--
Methylene Chloride	--	4	360	5	3	--	40
Diethyl Phthalate	--	--	--	3	--	--	--
Fluorene	--	--	--	3	--	--	--
Phenol	78	--	--	4	--	--	1
2,4-Dimethylphenol	76	--	--	--	--	--	--
2-Methylphenol	32	--	--	--	--	--	--
4-Methylphenol	110	--	--	--	--	--	--
2-Methylnaphthalene	--	--	--	9	--	--	--
Naphthalene	59	--	--	49	--	--	--
Polynuclear Aromatics (PNAs)							
Acenaphthene	--	--	--	3	--	--	--
Phenathrene	--	--	--	4	--	--	--
Total PNAs	--	--	--	7	--	--	--

[1] Only constituents that were detected are shown. For a complete list of laboratory results see Appendices B and C, Laboratory Analysis Reports.

[2] Blank cells (-) indicate constituent was not detected.

[3] Water Quality Goals, Human Health and Welfare, state or EPA Drinking Water Standards, Maximum Contaminant Levels (MCLs)

[4] Department of Health Services (DHS)

Table 9. CONSTITUENTS EXCEEDING ONE OR MORE COMPARISON CRITERIA

Constituent	Concentration	Location	DL Solid	LUFT	STLC	TTLC	MCL	SAL
Soil Samples (ppm)								
Toluene	7.00	MW-1	100	0.3	--	--	--	--
	0.48	MW-2	100	0.3	--	--	--	--
	0.72	MW-4	100	0.3	--	--	--	--
Xylene	86	MW-1	620	0.3	--	--	--	--
	7.2	MW-2	620	0.3	--	--	--	--
	1.6	MW-4	620	0.3	--	--	--	--
Ethylbenzene	6.6	MW-1	29	0.3	--	--	--	--
	0.5	MW-2	29	0.3	--	--	--	--
Low BP TPH	1,100	MW-1	--	10	--	--	--	--
	44	MW-2	--	10	--	--	--	--
High BP TPH	1,500	MW-1	--	100	--	--	--	--
	170	MW-2	--	100	--	--	--	--
Total PNAs	30	MW-1	0.000028	--	--	--	--	--
	2	MW-3	0.000028	--	--	--	--	--
Barium	210	MW-1	--	--	100	10,000	--	--
	160	MW-2	--	--	100	10,000	--	--
Cadmium	1.1	MW-1	--	--	1	100	--	--
Copper	40	MW-1	--	--	25	2,500	--	--
	59	MW-2	--	--	25	2,500	--	--
	43	MW-3	--	--	25	2,500	--	--
	53	MW-4	--	--	25	2,500	--	--
	62	MW-5	--	--	25	2,500	--	--
Lead	550	MW-1	--	--	5	1,000	--	--
	100	MW-2	--	--	5	1,000	--	--
	82	MW-3	--	--	5	1,000	--	--
	350	MW-4	--	--	5	1,000	--	--
	21	MW-5	--	--	5	1,000	--	--

Table 9. CONSTITUENTS EXCEEDING ONE OR MORE COMPARISON CRITERIA (continued)

Constituent	Concentration	Location	DL Solid[1]	LUFT[2]	STLC[3]	TTLC[4]	MCL[5]	SAL[6]
Mercury	0.33	MW-1	--	--	0.2	20	--	--
Nickel	30	MW-1	--	--	20	2,000	--	--
	36	MW-2	--	--	20	2,000	--	--
	22	MW-3	--	--	20	2,000	--	--
	25	MW-4	--	--	20	2,000	--	--
	42	MW-5	--	--	20	2,000	--	--
Vanadium	31	MW-2	--	--	24	2,400	--	--
	30	MW-4	--	--	24	2,400	--	--
	56	MW-5	--	--	24	2,400	--	--
Zinc	550	MW-1	--	--	250	5,000	--	--
	670	MW-2	--	--	250	5,000	--	--
Waste Extraction Test (ppm)								
Lead	3.4	MW-2	0.5	--	5	1,000	--	--
	4	MW-3	0.5	--	5	1,000	--	--
	6.5	MW-4	0.5	--	5	1,000	--	--
	0.94	MW-5	0.5	--	5	1,000	--	--
Nickel	0.63	MW-2	0.134	--	20	2,000	--	--
	0.81	MW-3	0.134	--	20	2,000	--	--
	0.57	MW-4	0.134	--	20	2,000	--	--
	0.96	MW-5	0.134	--	20	2,000	--	--

Table 9. CONSTITUENTS EXCEEDING ONE OR MORE COMPARISON CRITERIA (concluded)

Constituent	Concentration	Location	DL Solid	LUFT	STLC	TTLC	MCL	SAL
Water Samples (ppb)								
Benzene	4	MW-1	--	--	--	--	1	0.7
	4.9	MW-2	--	--	--	--	1	0.7
	3.7	MW-4	--	--	--	--	1	0.7
Toluene	430	MW-1	--	--	--	--	--	100
Methylene chloride	360	MW-3	--	--	--	--	--	40
Phenol	78	MW-1	--	--	--	--	--	1
	4	MW-4	--	--	--	--	--	1
Barium	1,400	MW-2	--	--	--	--	1,000	--
Lead	700	MW-1	--	--	--	--	50	--
	200	MW-2	--	--	--	--	50	--
	100	MW-4	--	--	--	--	50	--
	70	MW-5	--	--	--	--	50	--

[1] Designated Level in a Solid (Extractable from a solid, for WET results), Marshack 1987.
[2] Leaking Underground Fuel Tank Field Manual
[3] Soluble Threshold Limit Concentration
[4] Total Threshold Limit Concentration
[5] State DHS Primary Maximum Contaminant Level
[6] State DHS Action Level

Table 10. WATER PARAMETERS DURING SAMPLING

Well No.	Water Level (feet below MP)	Pre-Sample Discharge (gallons)	Salinity (% seawater)	Temperature (°C)	Specific Conductance ()mho/cm)	pH	Color	Odor	Turbidity
MW-1	--	15	20	20	28,000	7.5	Brown	hydrocarbon	slight
MW-2	8.85	50	8	19	11,000	7.8	Lt. Brown	hydrocarbon	slight
MW-3	6.7	40	8	22	11,000	8.1	Brown	hydrocarbon	slight
MW-4	9.95	50	2	21	3,300	8.2	Lt. Brown	hydrocarbon	slight
MW-5	9.0	40	3	19	4,300	7.8	Lt. Brown	hydrocarbon	very slight

MP - measuring point

Watergate Towers

Groundwater Monitoring Results
January and May 1989
(WCC, 1989)

TABLE 1A. MONITORING WELL NO. 1 ORGANIC COMPOUNDS DETECTED

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	-- (b)	10.0	60	20.0	1					5100
2-Butanone	(ug/L)	55	50.0	150	100.0	(b)					
Total 1,2-Dichloroethene	(ug/L)	--	10.0	100	20.0	0.007		16			224000
Ethyl benzene	(ug/L)	11	10.0	71	20.0	680					430
2-Hexanone	(ug/L)	2800	50.0	7200	100.0						
Toluene	(ug/L)	23	10.0	170	20.0	2000		100			6300
Total xylenes	(ug/L)	170	10.0	1200	20.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	--	2.0	--	4.0				(k)		970
Benzoic acid	(ug/L)	510	10.0	620	20.0						
Benzo(a)anthracene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(b)fluoranthrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(k)fluoranthrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Benzyl alcohol	(ug/L)	6.0	2.0	--	4.0						
Chrysene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Diethylphthalate	(ug/L)	--	2.0	--	4.0						2944
2,4-Dimethylphenol	(ug/L)	76	2.0	190	4.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	--	2.0	--	4.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	--	2.0	--	4.0				(k)		
2-Methylphenol	(ug/L)	32	2.0	92	4.0				(j)	(j)	
4-Methylphenol	(ug/L)	110	2.0	290	4.0				(j)	(j)	
Naphthalene	(ug/L)	59	2.0	140	4.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	4.0				(k)		(k)
Phenol	(ug/L)	78	2.0	130	4.0			1.0	(j)	(j)	5800
Sum of phenols	(ug/L)	296	2.0	702	4.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	59	2.0	140	4.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Ctiteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 1B. MONITORING WELL NO. 1 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (e), (f), (k)	SECONDARY MCLs (e)	ACTION LEVELS (g)	S.F. BAY BASIN PLAN (h)	CALIFORNIA OCEAN PLAN (i)	EPA ACUTE TOXICITY (j)
WATER QUALITY PARAMETERS (a), (b)											
Volume Removed	gal	15		9		(d)					
No. of Casing Volumes		2.9		3.5							
pH		7.5		7.0							
Specific Conductance	umhos/cm	28000		10000			1600				
Salinity (vs. seawater)	%	20		6							
Turbidity (c)	NTU	slight		NA			5				
Temperature	C	20		18							
Color		brown		olive/brown							
Odor		hydrocarbon		asphalts							
TITLE 22 TOTAL METALS AND ASBESTOS											
Antimony	(mg/L)	-- (d)	5.0	--	0.1						
Arsenic	(mg/L)	--	0.01	0.007	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	0.310	0.2	0.2	0.02	1.0					
Beryllium	(mg/L)	--	0.1	--	0.01						
Cadmium	(mg/L)	--	0.1	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.005	0.05			0.011	0.002	
Chromium III	(mg/L)	0.150	0.05	0.073	0.005	0.05					10.3
Cobalt	(mg/L)	--	0.5	--	0.05						
Copper	(mg/L)	--	0.1	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.700	0.005	0.098	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.5	0.084	0.05						
Nickel	(mg/L)	--	0.5	0.11	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.1	--	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	5.0	0.79	0.5						2.13
Vanadium	(mg/L)	--	0.5	0.37	0.05						
Zinc	(mg/L)	--	0.1	0.095	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	2500	50.0	7700	30.0						
Benzene	(ug/L)	4.0	0.5	47	0.3	1					5100
Toluene	(ug/L)	430	0.5	680	0.3	2		100			6300
Ethyl Benzene	(ug/L)	9.0	0.5	35	0.3	680					430
Total Xylenes	(ug/L)	140	0.5	550	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	290	50.0	11000	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	1.4	1.0	3800	1.0						

(a) Values estimated to two significant figures based on field measurements.

(b) Well bailed dry on May 2, sampled May 3 due to slow recovery.

(c) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.

(d) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(e) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washinton D.C. February, 1989.

(f) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(g) Drinking Water Action Levels Recommended by the Department of Health Services. State of California Department of Health Services, April 19, 1989.

(h) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(i) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(j) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(k) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 2A. MONITORING WELL NO. 2 ORGANIC COMPOUNDS DETECTED AND WATER QUALITY CRITERIA

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	4.9	2.0	14	2.0	1					5100
2-Butanone	(ug/L)	--	10.0	--	10.0	(b)					
Total 1,2-Dichloroethene	(ug/L)	--	2.0	--	2.0	0.007		16			224000
Ethyl benzene	(ug/L)	--	2.0	--	2.0	680					430
2-Hexanone	(ug/L)	--	10.0	--	10.0						
Toluene	(ug/L)	--	2.0	--	2.0	2000		100			6300
Total xylenes	(ug/L)	--	2.0	--	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	--	2.0	--	2.0				(k)		970
Benzoic acid	(ug/L)	--	10.0	12	10.0						
Benzo(a)anthracene	(ug/L)	--	2.0	3.6	2.0				(k)		(k)
Benzo(b)fluoranthene	(ug/L)	--	2.0	5.7	2.0				(k)		(k)
Benzo(k)fluoranthene	(ug/L)	--	2.0	7.5	2.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	7.8	2.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	6.8	2.0				(k)		(k)
Benzyl alcohol	(ug/L)	--	2.0	--	2.0						
Chrysene	(ug/L)	--	2.0	4.0	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	7.9	2.0				(k)		(k)
Diethylphthalate	(ug/L)	--	2.0	--	2.0						2944
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
Naphthalene	(ug/L)	--	2.0	2.2	2.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	8.1	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenol	(ug/L)	--	2.0	--	2.0			1	(j)	(j)	5800
Sum of phenols	(ug/L)	--	2.0	--	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	--	2.0	53.6	2.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Criteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 2B. MONITORING WELL NO. 2 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (j)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	50		10		(c)					
No. of Casing Volumes				3.5							
pH		7.8		7							
Specific Conductance	umhos/cm	11000		17000			1600				
Salinity (vs. seawater)	%	8		11.5							
Turbidity (b)	NTU	slight		18			5				
Temperature	C	19		19							
Color		Lt. Brown		Gray							
Odor		hydrocarbon		Asphalts							
TITLE 22 TOTAL METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	5.0	--	0.1						
Arsenic	(mg/L)	--	0.01	0.0098	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	1.4	0.2	0.68	0.02	1.0					
Beryllium	(mg/L)	--	0.1	--	0.01						
Cadmium	(mg/L)	--	0.1	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.05	0.05			0.011	0.002	
Chromium III	(mg/L)	--	0.05	0.005	0.005	0.05					10.3
Cobalt	(mg/L)	--	0.5	--	0.05						
Copper	(mg/L)	--	0.1	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.2	0.005	0.18	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.5	0.050	0.05						
Nickel	(mg/L)	--	0.5	--	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.1	0.012	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	5.0	0.11	0.5						2.13
Vanadium	(mg/L)	--	0.5	--	0.05						
Zinc	(mg/L)	--	0.1	0.18	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	67	50.0	130	30.0						5100
Benzene	(ug/L)	1.1	0.5	14	0.3	1					6300
Toluene	(ug/L)	0.57	0.5	0.84	0.3	2		100			430
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					
Total Xylenes	(ug/L)	0.9	0.5	1.2	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	--	50.0	430	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	--	1.0	7.2	1.0						

(a) Values estimated to two significant figures based on field measurements.

(b) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.

(c) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 3A. MONITORING WELL NO. 3 ORGANIC COMPOUNDS DETECTED

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	--	4.0	2.5	2.0	1					5100
2-Butanone	(ug/L)	--	20.0	--	10.0	(b)					
Total 1,2-Dichloroethene	(ug/L)	--	4.0	--	2.0	0.007		16			224000
Ethyl benzene	(ug/L)	--	4.0	--	2.0	680					430
2-Hexanone	(ug/L)	--	20.0	--	10.0						
Toluene	(ug/L)	--	4.0	--	2.0	2000		100			6300
Total xylenes	(ug/L)	--	4.0	--	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	--	2.0	--	2.0				(k)		970
Benzoic acid	(ug/L)	--	10.0	--	10.0						
Benzo(a)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(b)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(k)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzyl alcohol	(ug/L)	--	2.0	--	2.0						
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Diethylphthalate	(ug/L)	--	2.0	--	2.0						2944
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
Naphthalene	(ug/L)	--	2.0	--	2.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenol	(ug/L)	--	2.0	--	2.0			1.0	(j)	(j)	5800
Sum of phenols	(ug/L)	--	2.0	--	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	--	2.0	--	2.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Ctiteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 3B. MONITORING WELL NO. 3 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (j)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	40		15		(c)					
No. of Casing Volumes		17.4		6.5							
pH		8.1		7.4							
Specific Conductance	umhos/cm	11000		4100			1600				
Salinity	%	8		2.6							
Turbidity (b)	NTU			35			5				
Temperature	C	22		17							
Color		brown		olive/gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 TOTAL METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	0.5	--	0.1						
Arsenic	(mg/L)	--	0.01	0.01	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	--	0.2	0.096	0.02	1.0					
Beryllium	(mg/L)	--	0.01	--	0.01						
Cadmium	(mg/L)	--	0.01	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.005	0.050			0.011	0.002	
Chromium III	(mg/L)	--	0.005	0.012	0.005	0.050					10.3
Cobalt	(mg/L)	--	0.05	--	0.05						
Copper	(mg/L)	--	0.01	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.050	0.005	0.03	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.5	--	0.05						
Nickel	(mg/L)	--	0.05	--	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.01	--	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	0.5	0.66	0.5						2.13
Vanadium	(mg/L)	--	0.5	--	0.05						
Zinc	(mg/L)	0.098	0.01	0.039	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	--	50.0	30	30.0						
Benzene	(ug/L)	--	0.5	1.4	0.3	1					5100
Toluene	(ug/L)	--	0.5	0.52	0.3	2		100			6300
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					430
Total Xylenes	(ug/L)	0.64	0.5	0.3	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	540	50.0	420	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	--	1.0	6.1	1.0						

(a) Values estimated to two significant figures based on field measurements.

(b) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.

(c) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washinton D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the Department of Health Services. State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 4A. MONITORING WELL NO. 4 ORGANIC COMPOUNDS DETECTED

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	3.7	2.0	--	2.0	1					5100
2-Butanone	(ug/L)	-- (b)	10.0	13	10.0	(b)					
Total 1,2-Dichloroethene	(ug/L)	--	2.0	--	2.0	0.007		16			224000
Ethyl benzene	(ug/L)	--	2.0	--	2.0	680					430
2-Hexanone	(ug/L)	--	10.0	--	10.0						
Toluene	(ug/L)	9.6	2.0	4.3	2.0	2000		100			6300
Total xylenes	(ug/L)	9.6	2.0	4.3	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	3.0	2.0	3.4	2.0				(k)		970
Benzoic acid	(ug/L)	--	10.0	52	10.0						
Benzo(a)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(b)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(k)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzyl alcohol	(ug/L)	--	2.0	--	2.0						
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Diethylphthalate	(ug/L)	3.0	2.0	--	2.0						2944
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	3.0	2.0	2.0	2.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	9.0	2.0	6.8	2.0				(k)		
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	36	2.0				(j)	(j)	
Naphthalene	(ug/L)	49	2.0	20	2.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	4.0	2.0	4.0	2.0				(k)		(k)
Phenol	(ug/L)	4.0	2.0	--	2.0			1.0	(j)	(j)	5800
Sum of phenols	(ug/L)	4.0	2.0	36	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	68.0	2.0	36	2.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Ctiteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 4B. MONITORING WELL NO. 4 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (j)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	50		10		(c)					
No. of Casing Volumes		20		4							
pH		8.2		6.4							
Specific Conductance	umhos/cm	3300		1700			1600				
Salinity	%	2									
Turbidity (b)	NTU	slight		NA			5				
Temperature	C	21		19							
Color		lt. brown		gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 TOTAL METALS AND ASBESTOS TESTS OF GROUNDWATER											
Antimony	(mg/L)	-- (c)	0.5	--	0.1						
Arsenic	(mg/L)	--	0.01	0.003	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	0.85	0.02	0.84	0.02	1.0					
Beryllium	(mg/L)	--	0.01	--	0.01						
Cadmium	(mg/L)	--	0.01	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.005	0.050			0.011	0.002	
Chromium III	(mg/L)	--	0.005	0.036	0.005	0.05					10.3
Cobalt	(mg/L)	--	0.05	0.05	0.05						
Copper	(mg/L)	--	0.01	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.10	0.005	0.22	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.05	--	0.05						
Nickel	(mg/L)	0.064	0.05	0.072	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.01	--	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	0.5	--	0.5						2.13
Vanadium	(mg/L)	--	0.05	--	0.05						
Zinc	(mg/L)	0.17	0.01	0.95	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	120	50.0	150	30.0						
Benzene	(ug/L)	0.93	0.5	1.7	0.3	1					5100
Toluene	(ug/L)	7.9	0.5	3.9	0.3	2		100			6300
Ethyl Benzene	(ug/L)	1.9	0.5	1.1	0.3	680					430
Total Xylenes	(ug/L)	6.9	0.5	3.8	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	540	50.0	500	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	3.5	1.0	7.2	1.0						

(a) Values estimated to two significant figures based on field measurements.

(b) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.

(c) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washinton D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the Department of Health Services. State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) If state and federal guidelines both exist, the lower of the two concentrations limits is given.

TABLE 5A. MONITORING WELL NO. 5 ORGANIC COMPOUNDS DETECTED

PARAMETER (a)	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (l)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
VOLATILE ORGANICS (EPA Method 8240)											
Benzene	(ug/L)	--	2.0	--	2.0	1					5100
2-Butanone	(ug/L)	--	10.0	--	10.0	(b)					
Total 1,2-Dichloroethene	(ug/L)	--	2.0	--	2.0	0.007		16			224000
Ethyl benzene	(ug/L)	--	2.0	--	2.0	680					430
2-Hexanone	(ug/L)	--	10.0	--	10.0						
Toluene	(ug/L)	--	2.0	3.3	2.0	2000		100			6300
Total xylenes	(ug/L)	2.3	2.0	3.0	2.0	1750		620			
EXTRACTABLE ORGANICS (EPA Method 8270)											
Acenaphthene	(ug/L)	--	2.0	--	2.0				(k)		970
Benzoic acid	(ug/L)	--	10.0	--	10.0						
Benzo(a)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(b)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(k)fluoranthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(g,h,i)perylene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzo(a)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Benzyl alcohol	(ug/L)	--	2.0	--	2.0						
Chrysene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Dibenz(a,h)anthracene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Diethylphthalate	(ug/L)	--	2.0	--	2.0						2944
2,4-Dimethylphenol	(ug/L)	--	2.0	--	2.0			400 (c)	(j)	(j)	
Fluorene	(ug/L)	--	2.0	--	2.0				(k)		(k)
2-Methylnaphthalene	(ug/L)	--	2.0	--	2.0				(k)		
2-Methylphenol	(ug/L)	--	2.0	--	2.0				(j)	(j)	
4-Methylphenol	(ug/L)	--	2.0	45	2.0				(j)	(j)	
Naphthalene	(ug/L)	--	2.0	--	2.0				(k)		2350
Indeno(1,2,3-cd)pyrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenanthrene	(ug/L)	--	2.0	--	2.0				(k)		(k)
Phenol	(ug/L)	--	2.0	--	2.0			1.0	(j)	(j)	5800
Sum of phenols	(ug/L)	--	2.0	45	2.0				500	30 (j)	
Sum of polynuclear aromatic hydrocarbons	(ug/L)	--	2.0	--	2.0				15		300

(a) Compounds listed are only those compounds detected in one or more of the wells sampled. Data for other compounds (not detected) is available in Appendix C.

(b) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(c) Taste and odor threshold.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washington D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) Refer to "Sum of phenols" for comparison criteria. Ctiteria for California Ocean Plan refers to total non-chlorinated phenols.

(k) Refer to "Sum of polynuclear aromatic hydrocarbons" for comparison to criteria.

(l) If state and federal guidelines both exist, the lower of the two concentration limits is given.

TABLE 5B. MONITORING WELL NO. 5 WATER QUALITY DATA, INORGANICS, AND HYDROCARBONS DETECTED

PARAMETER	UNITS	SAMPLING EVENT				DRINKING WATER CRITERIA			MARINE CRITERIA		
		January	Detection Limit	May	Detection Limit	PRIMARY MCLs (d), (e), (j)	SECONDARY MCLs (d)	ACTION LEVELS (f)	S.F. BAY BASIN PLAN (g)	CALIFORNIA OCEAN PLAN (h)	EPA ACUTE TOXICITY (i)
WATER QUALITY PARAMETERS (a)											
Volume Removed	gal	40		10		(c)					
No. of Casing Volumes		16		4							
pH		7.8		6.6							
Specific Conductance	umhos/cm	4300		4100			1600				
Salinity	%	3		2.8							
Turbidity (b)	NTU	very slight		25			5				
Temperature	C	19		21							
Color		lt. brown		gray							
Odor		hydrocarbon		hydrocarbon							
TITLE 22 METALS AND ASBESTOS											
Antimony	(mg/L)	-- (c)	0.5	--	0.1						
Arsenic	(mg/L)	0.037	0.01	0.027	0.001	0.050			0.020	0.008	2.319
Barium	(mg/L)	0.74	0.02	0.65	0.02	1.0					
Beryllium	(mg/L)	--	0.01	--	0.01						
Cadmium	(mg/L)	--	0.01	--	0.01	0.010			0.010	0.003	
Chromium VI	(mg/L)	--	0.005	--	0.05	0.050			0.011	0.002	
Chromium III	(mg/L)	--	0.005	0.015	0.005	0.05					10.3
Cobalt	(mg/L)	--	0.05	0.05	0.05						
Copper	(mg/L)	--	0.01	--	0.01		1.0		0.020	0.005	
Lead	(mg/L)	0.07	0.005	0.16	0.005	0.050			0.0056	0.008	
Mercury	(mg/L)	--	0.001	--	0.001	0.002			0.001	0.000140	
Molybdenum	(mg/L)	--	0.05	--	0.05						
Nickel	(mg/L)	0.078	0.05	--	0.05				0.0071	0.020	
Selenium	(mg/L)	--	0.01	--	0.01	0.010					
Silver	(mg/L)	--	0.01	--	0.01	0.050			0.0023	0.000450	
Thallium	(mg/L)	--	0.5	0.19	0.5						2.13
Vanadium	(mg/L)	--	0.05	--	0.05						
Zinc	(mg/L)	0.076	0.01	0.18	0.01		5.0		0.058	0.020	
Asbestos	(fibers/g)			--	100	7					
PETROLEUM HYDROCARBONS AND OIL AND GREASE (EPA Methods 8015/8020)											
Low/Medium BP Hydrocarbons Gasoline Standard	(ug/L)	--	50.0	34	30.0						
Benzene	(ug/L)	--	0.5	--	0.3	1					5100
Toluene	(ug/L)	1.1	0.5	--	0.3	2		100			6300
Ethyl Benzene	(ug/L)	--	0.5	--	0.3	680					430
Total Xylenes	(ug/L)	1.8	0.5	0.84	0.3	1750					
High BP Hydrocarbons Diesel Standard	(ug/L)	270	50.0	390	50.0						
Oil and Grease (EPA Method 413.2)	(mg/L)	--	1.0	5.0	1.0						

(a) Values estimated to two significant figures based on field measurements.

(b) Due to settlement of particulates, turbidity varied with time from sample collection. Values are approximate.

(c) -- indicates parameter below detection limit. Blank indicates no test performed or no water quality criteria known.

(d) Drinking Water Regulations Under the Safe Drinking Water Act. U.S. EPA, Criteria and Standards Division, Washinton D.C. February, 1989.

(e) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for Contaminants in Drinking Water. April, 1989. California code of Regulations. Title 22.

(f) Drinking Water Action Levels Recommended by the Department of Health Services. State of California Department of Health Services, April 19, 1989.

(g) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December 1986. Table IV-1 (Shallow Water).

(h) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(i) U.S. Environmental Protection Agency, Water Quality Advisories. March 1986. and U.S. Environmental Protection Agency, Quality Criteria for Water. May 1986 and various updates.

(j) If state and federal guidelines both exist, the lower of the two concentration limits is given.

Watergate Tower

Miscellaneous Information
Underground Fuel Tanks
Asbestos-Containing Building Materials for PCBs

GOLDSMITH AND LATHROP
COMMERCIAL AND INDUSTRIAL REAL ESTATE

August 30, 1989

Ms. Robin Ijams
Michael Brandman & Associates
2530 Red Hill Avenue
Santa Ana, CA 92705

Re: Watergate Office Towers
Emeryville, California

Dear Robin:

In response to your request, enclosed are the following documents:

1.) Precision test for the two underground gasoline tanks located in the parking structure, together with the permit for the tanks from the Alameda County Health Care Services Agency.

2.) A copy of a letter from PG&E dated March 20, 1989 indicating that the transformer serving Watergate Tower I found to contain PCB levels in excess of 50 parts per million was replaced with a new transformer.

3.) A copy of a letter from Coast Insulation Contractors dated July 30, 1989 indicating the deteriorated duct lining in Tower I is fiberglas insulation. This duct liner has subsequently been removed.

4.) Copies of the letters transmitting the environmental site assessment prepared by Woodward-Clyde to the appropriate governmental regulatory bodies, including the Regional Water Quality Control Board.

As I indicated to you on the phone, we met personally with Mr. Anders Lundgren of the Regional Water Quality Control Board and I will contact him so that he can expect your call. I will call you as soon as I have been able to reach Mr. Lundgren. In the meantime, if you have any questions or require any additional information, pleae do not hesitate to contact me.

Sincerely,

GOLDSMITH AND LATHROP

Thomas N. Lathrop

Thomas N. Lathrop

CC: Roy Ikeda
Allan Lattanner

TNL:ksb
encs.

2000 POWELL STREET · SUITE 1660 · EMERYVILLE, CALIFORNIA 94608 · 415/547-4770 · FAX (415) 547-2348

GOLDSMITH AND LATHROP
COMMERCIAL AND INDUSTRIAL REAL ESTATE

August 3, 1989

Mr. Alan Lattanner
Woodward-Clyde Consultants
97 So. 2nd Street, Ste. 2000
San Jose, CA 95113

Dear Allan:

The environmental site assessment for the Watergate Office Complex revealed some insulation in Watergate Tower I, which was deteriorating. We are removing the insulation and have determined that the it contains no asbestos fibers.

Enclosed is a copy of a letter from the insulation contractor together with a specification sheet for the type of fiberglass material that makes up the insulation. Would you please make sure a note or copy of this letter is included with your files on the subject for future reference.

Sincerely,

GOLDSMITH AND LATHROP

Thomas N. Lathrop

TNL:ksb
enc.

2000 POWELL STREET · SUITE 1660 · EMERYVILLE, CALIFORNIA 94608 · 415/547-4770 · FAX (415) 547-2348

CONSULTING
TESTING
RISK ASSESMENT

TANK TECH INC.

TANK TESTING • RISK ASSESSMENT CONSULTING

3111 DEPOT ROAD, HAYWARD, CALIFORNIA 94545

INVOICE

8679

SOLD TO: GOLDSMITH AND LATHROP
2000 POWELL STREET, SUITE#1660
EMERYVILLE, CA 94608

SHIP TO: ATTN: TOM SHEEHAN

DATE	DATE SHIPPED	TERMS	SHIPPED VIA	FOB	SALESMAN	OUR ORDER NO	CUST. ORDER NO.
/10/89							

QUANTITY	DESCRIPTION	UNIT PRICE		AMOUNT	
2	UNDERGROUND TANKS PRECISION TESTED	375	00	750	00
	SALES TAX				
	TOTAL			750	00

EZY-CHEK REPORT AND WORK SHEET

1. Testing Contractor

TANK TECH INC.

3111 Depot Road

Hayward, Ca. 94545

(415) 782-2733

2. Operator Name

BILL BERNIE

3. Owner of Site

GOLDSMITH & LATHROP

2000 POWELL STREET

EMERYVILLE, CA 94608

( )

4. Owner of Tanks

5. Send Invoice and Results to

GOLDSMITH & LATHROP

ATTN: TOM SHEEHAN

2000 POWELL STREET, SUITE #1660
EMERYVILLE, CA 94608

( )

6. Send Results to

6A. Horner Creative Products Inc.

413 State Park Drive

Bay City, Michigan 48706-1338

(517) 684-7190

6B.

6C.

7. Capacity

	REGULAR NO-LEAD	SUPER NO-LEAD			
1.	10,000				
2.		10,000			
3.					
4.					
5.					
6.					

8. Remarks

9. Age of Tanks and Lines

1. 7 YRS 2. 7 YRS 3. 4. 5. 6.

10. Diameter and Make of Tank

	Steel	Fiberglass
1.		105"
2.		105"
3.		
4.		
5.		
6.		

11. Length of Fillpipe

1. 57½"
2. 53"
3.
4.
5.
6.

12. Color Code of Product

1. N/A
2.
3.
4.
5.
6.

13. Type of System

	Submerged	Suction
1.		YES
2.		YES
3.		
4.		
5.		
6.		

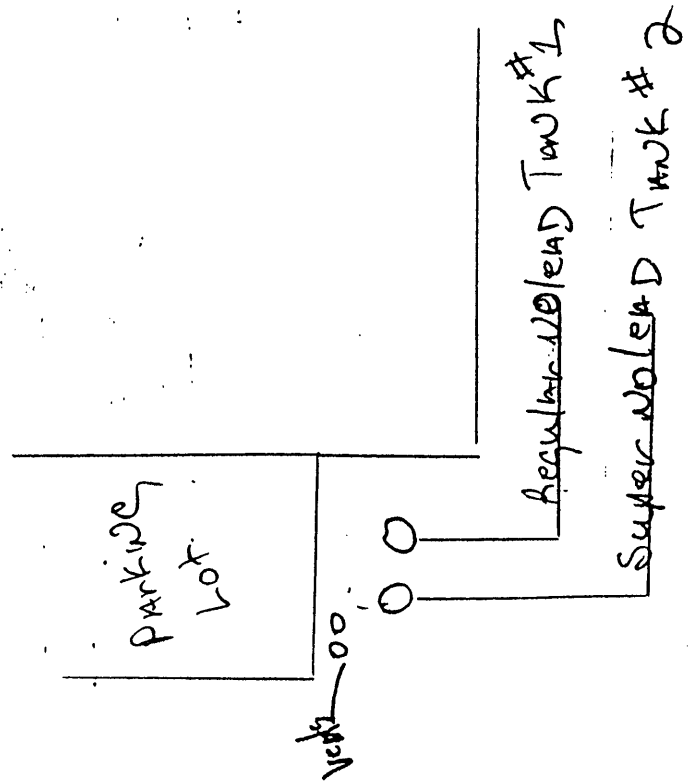
14. Water Level in Tank

1. NONE
2. NONE
3.
4.
5.
6.

15. Station Layout

Goldsmith & Lathop
2000 Powell St
Emeryville, CA 94608

North



West

East

6. Tank Testing Results

	Product	Capacity	High Test Result	Low Test Result	Certify Tight
1.	REGULAR NO-LEAD	10,000	PASS(-.0050	GL/HR)	YES
2.	SUPER NO-LEAD	10,000	PASS(-.0037	GL/HR)	YES
3.					
4.					
5.					

17. Line Test Results

1. N/A
2.
3.
4.
5.
6.

18. Remarks: Above Tanks were tested in accordance with the guldelines of NFPA 329 & the CALIFORNIA ADMINISTRATIVE CODE TITLE 23 WATERS SUBCHAPTER 16 UNDERGROUND TANK REGULATIONS for the determination of the tanks integrity requiring the detection of a leak with an accuracy of ±0.05 gallons per hour. Method used was the Horner EZY-CHECK LEAK DETECTION SYSTEM, accurate to ±0.05 gallons per hour.

Operators Signature Bill Bennett

Water Level None
Test hight start
Test hight finish

WORK SHEET

Total 48 45 47

Ambient temp.

#1 Red Test level Hi/n Product Regular Capacity 8000 Chart cal. .005 + 46.66 = .0005 (A)

Measured gravity 665@ Product temp. 62° F Coefficient 56.8 Temp. cal. .0005837 x 10,000 = 5.837 (B)

	level start	level end	gain + loss −	x(A)	level result	temp. start	temp. end	gain + loss −	x(B)	temp. result	final result	tim
1	75	72	= −7	x .0005	= −.0035	.767	.760	= −.007	x 5.837	= −.0408	= .0373	1.
2	71	66	= −6	x	= −.0030	.760	.744	= −.006	x	= −.0350	+ .0350	
3	65	58	= −7	x	= −.0035	.744	.744	= 0	x	= 0	= .0035	
4	58	51	= −7	x	= −.0035	.744	.744	= 0	x	= 0	= .0035	
5	51	45	= −6	x	= −.0030	.744	.747	= +.003	x	= +.0175	= .0205	
6	46	40	= −5	x	= −.0025	.747	.743	= −.004	x	= −.0233	= .0208	
7	40	37	= −3	x	= −.0015	.743	.742	= −.001	x	= .0058	+ .0043	
8	36	34	= −2	x	= −.0010	.742	.741	= −.001	x	= −.0058	+ .0048	
9	34	31	= −3	x	= −.0015	.741	.743	= +.002	x	= +.0117	= .0102	
10	61	59	= −2	x	= −.0010	.743	.743	= 0	x	= 0	= .0010	
11	59	57	= −2	x	= −.0010	.743	.743	= 0	x	= 0	= .0010	
12	57	56	= −1	x	= −.0005	.743	.742	= −.001	x	= −.0058	+ .0053	
13	56	54	= −2	x	= −.0010	.742	.742	= 0	x	= 0	= .0010	
14	54	51	= −3	x	= −.0015	.742	.743	= +.001	x	= +.0058	= .0073	
15	51	50	= −1	x	= −.0005	.743	.743	= 0	x	= 0	= .0005	
16	50	48	= −2	x	= −.0010	.743	.742	= −.001	x	= −.0058	= .0068	
17	48	47	= −1	x	= −.0005	.742	.742	= 0	x	= 0	= .0005	
18	47	45	= −2	x	= −.0010	.742	.741	= −.001	x	= −.0058	+ .0048	
19	45	45	= 0	x	= 0	.741	.741	= 0	x	= 0	= 0	
20	45	44	= −1	x	= −.0005	.741	.741	= 0	x	= 0	= .0005	
			=	x	=			=	x	=	=	

Average

Station location Gold Smith's Cruthers

Address 2000 Powell St

City, State Emeryville Ca

Certified tight PASS

Leak rate per hour -.0000 cf/hr

Operator Bill Berini

Water Level _____
Test Night start _____
Test Night finish _____

EZ-TORK WORK SHEET

Total _____

Ambient temp. _____

Tank # Blue 2 Test level High Product Super Capacity 10000 Chart cal. .025 + 34.33 = .0007 (A)

Measured gravity 58.8@ Product temp. 63°F Coefficient 58.4@ Temp. cal. .0006028 x 10,000 = 6.028 (B)

	level start	level end	gain + loss −	x (A)	level result	temp. start	temp. end	gain + loss −	x (B)	temp. result	final result	Hr
	71	61	−10	x .0007	−.0007	.742	.736	−.006	x 6.028	−.0422	−.0415	
2	61	60	−1	x	−.0007	.735	.739	+.004	x	+.0241	+.0318	
3	49	39	−10	x	−.0070	.739	.739	0	x	0	−.0070	
4	39	26	−13	x	−.0091	.739	.739	0	x	0	−.0091	
5	25	9	−16	x	−.0112	.739	.734	−.005	x	−.0301	+.0189	
6	8	0	−8	x	−.0056	.734	.728	−.006	x	−.0362	+.0306	
7	93	91	−2	x	−.0014	.728	.730	+.002	x	+.0121	−.0135	
8	90	89	−1	x	−.0007	.730	.730	0	x	0	−.0007	
9	90	87	−3	x	−.0021	.730	.728	−.002	x	−.0121	+.0100	
10	88	85	−3	x	−.0021	.728	.728	0	x	0	−.0021	
11	86	84	−2	x	−.0014	.728	.729	+.001	x	+.0060	−.0074	
12	85	83	−2	x	−.0014	.729	.729	0	x	0	−.0014	
13	84	81	−3	x	−.0021	.729	.729	0	x	0	−.0021	
14	82	80	−2	x	−.0014	.729	.728	−.001	x	−.0060	+.0046	
15	82	79	−3	x	−.0021	.728	.726	−.002	x	−.0121	+.0100	
16	79	79	0	x	0	.726	.726	0	x	0	0	
17	79	80	+1	x	+.0007	.726	.727	+.001	x	+.0060	−.0053	
18	80	78	−2	x	−.0014	.727	.727	.001	x	.0060	+.0046	
19	78	77	−1	x	−.0007	.727	.727	0	x	0	−.0007	
20	79	77	0	x	0	.727	.728	+.001	x	+.0060	−.0060	

Average _____

Station location Goldsmith's Maythorn

Address 2000 Powell St

City, State Emeryville CA

Certified tight press

Leak rate per hour _____

Operator Bill Beemer

EZY-CHECK
WORK SHEET

Compnay Name: GOLDSMITH & LATHROP

Contact: TOM SHEEHAN

Address: 2000 POWELL STREET, SUITE #1660

City, State: EMERYVILLE, CA 94608

Telephone:

Contractor: TANK TECH INC.

Address: 3111 DEPOT RD.

City, State: HAYWARD, CA 94545

Tank Farm Location: GOLDSMITH & LATHROP

Contact: TOM SHEEHAN

Address: 2000 POWELL STREET

City, State: EMERYVILLE, CA 94608

Telephone:

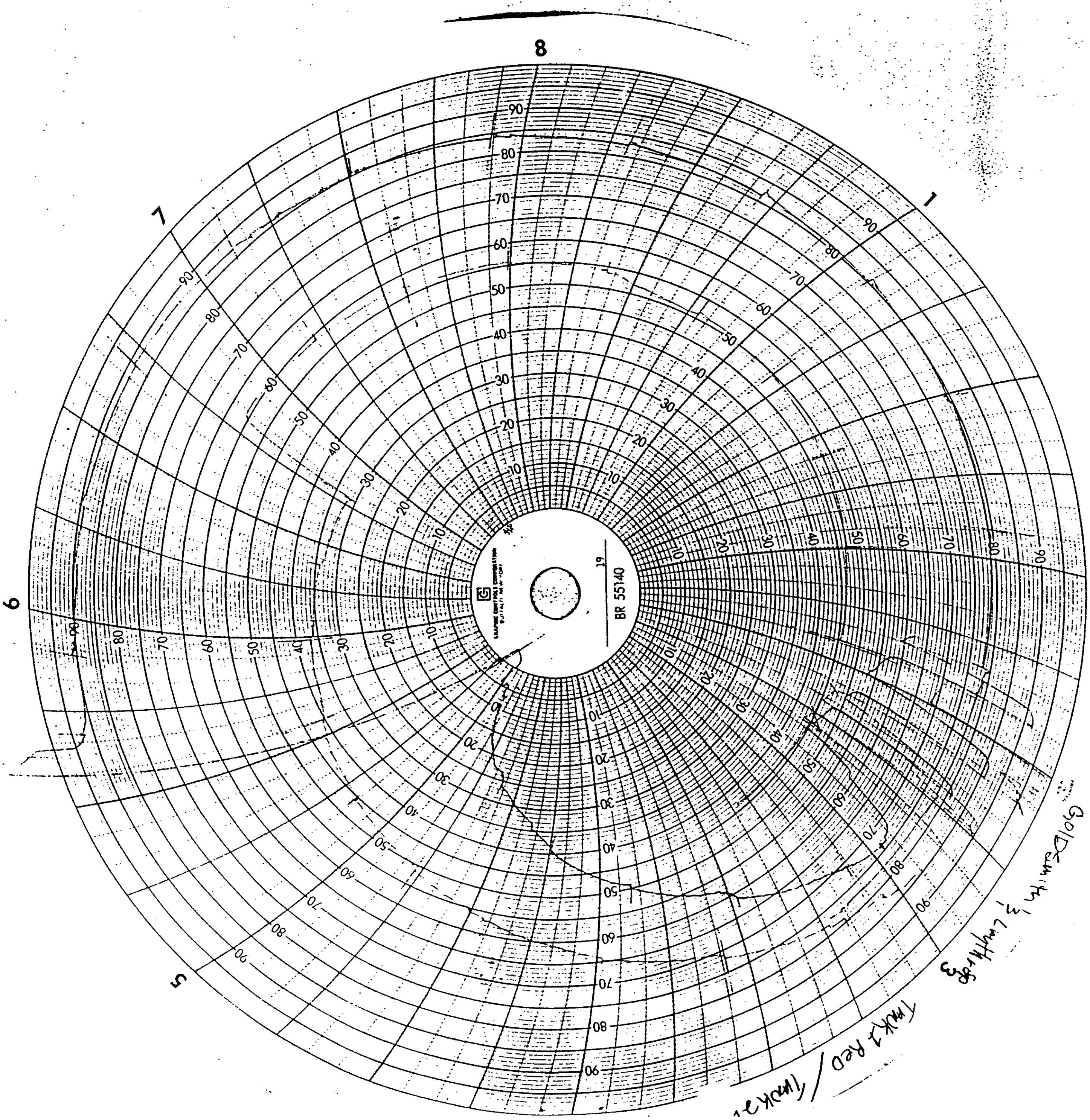
Operator: BILL BERNIE

Date: 4/10/89

Telephone: (415) 782-2733

Tank#	Capacity	Diameter	Product	High Test Results	Low Test Results	Certified Tight
1	10,000	105"	REGULAR NO-LEAD	PASS(-.0050 GAL/HR)		YES
2	10,000	105"	SUPER NO-LEAD	PASS(-.0037 GL/HR)		YES

Remarks: ABOVE TANKS WERE TESTED IN ACCORDANCE WITH THE GUIDELINES OF NFPA 329 & THE CALIFORNIA ADMINISTRATIVE CODE TITLE 23 WATERS SUBCHAPTER 16 UNDERGROUND TANK REGULATIONS FOR THE DETERMINATION OF THE TANKS INTEGRITY REQUIRING THE DETECTION OF A LEAK WITH AN ACCURACY OF +/-0.05 GALLONS PER HOUR. METHOD USED WAS THE HORNER EZY-CHECK LEAK DETECTION SYSTEM, ACCURATE TO +/-0.05 GALLONS PER HOUR.



GOLDsmith's Lumber

TANK 1 RED / TANK 2

GOLDSMITH AND LATHROP
COMMERCIAL AND INDUSTRIAL REAL ESTATE

February 9, 1989

Mr. Alan V. Lattanner, R.E.A., R.Gp.
Woodware-Clyde Consultants
500 - 12th Street, Ste. 100
Oakland, CA 94607-4014

Dear Alan:

Enclosed for your information is a copy of a letter from the supplier of the ceiling tile in Watergate Tower I. As the letter indicates, it is believed the ceiling tile produced by Johns Manville does not contain asbestos. I assume if it becomes necessary we could confirm that Johns Manville stopped using asbestos in 1969 as the letter states.

If you have any questions or if you feel it is important to pursue the matter further please do not hesitate to contact me.

Sincerely,

GOLDSMITH AND LATHROP

Thomas N. Lathrop

TNL:kly
Enc.

STEVELLE
CONSTRUCTION
COMPANY

SUITE 1100 • WATERGATE TOWER • 1900 POWELL STREET
EMERYVILLE, CA 94608 • 415/547-5910 • FAX (415) 653-5062 • LIC. 444584

February 9, 1989

M E M O R A N D U M

TO: Tom Lathrop

FROM: Steve Lathrop

SUBJECT: TOWER I

Attached is a letter indicating that production of ceiling tile with asbestos in it ceased in 1969. Since ceiling tile was installed in Tower I starting in 1973 there would be no asbestos in the tile.

If I can be of any further assistance, please call me.

SPL/kej

cc: FP Lathrop

30900 Huntwood Avenue • Hayward, CA 94544
415/489-4441 • FAX 415/489-5187

Febraury 6, 1989

Mr. Steve Lathrop
Stevelle Construction Co.
Tower #1
1900 Powell St.
Suite 1120
Emeryville, Ca.

Subject: Ceiling Tile/Tower #1

Dear Steve,

The purpose of this letter is to provide some help in the verification of the type of ceiling tile used in Tower #1 during original installation from 1973 to 1975.

It is my recollection that the tile was manufactured by Johns-Manville Corp. and sold to the Ceiling Contractor by Construction Material Suppliers where I was employed at the time. Johns-Manville Corp. along with Celotex, Gold Bond, and U.S. Gypsum produced Acoustical Ceiling Products and as I remember there were letters written by Johns Manville in the early 1970's stating that asbestod was no longer used in any ceiling tile or panels after 1969. I do not have a copy of any letters and as you may know Johns Manville went out ot the Acoustical Ceiling Business in mid 1970 so information related to the actual date that asbestos ceased to be used is not available.

Please call if you have any questions.

Very Truly Yours,

D.O. Kuerbis

Please call at 549-6027, if you have additionally concerns or questions regarding these transformers or their test results.

Sincerely,

RUSSELL N. PENROSE
Major Account Representative

Pacific Gas and Electric Company

Central Division
1919 Webster Street
Oakland, CA 94612
415/835-8500

Robert L. Harris
Manager

March 20, 1989

Mr. Bob Slaney
Goldsmith & Lathrop
2000 Powell Street, Suite 1660
Emeryville, CA 94608

Dear Bob:

As you are aware, the transformer serving Watergate Tower I was found to contain PCB levels in excess of 50 ppm. This level of PCB was discovered on February 5, 1989, during a test which Goldsmith and Lathrop had earlier requested.

On March 12, 1989, PG&E removed and replaced this transformer. The new transformer installed on this site bears a manufacturer's label stating "less than 1 ppm of PCB at time of manufacturing". As we have discussed before, from a practical standpoint, this transformer contains zero PCB; however, Federal regulations required the label.

Please call me at 549-6027, if you have additional questions or concerns regarding this transformer.

Sincerely,

RUSSELL N. PENROSE
Major Account Representative

RNP:st

APPENDIX D
ASBESTOS INSPECTION MEMO

MEMORANDUM January 24, 1989

To: Alan Lattanner

From: Ann McDonald

Subject: Preliminary asbestos survey of 1800 Powell St., Oakland, California, January 23, 1989.

A tour of the following sections of the building at 1800 Powell St., Oakland, California was done January 23 to identify possible asbestos containing material (ACM) or asbestos containing building material (ACBM) in a preliminary survey. Joe Condon, maintenance foreman for the building, accompanied me. The following areas were examined; heating and cooling and air circulating systems, boiler and cooler rooms, stairwells on the 1st and 12th floors, hall areas of the 1st and 12th floors, electrical control room, janitors closets, maintenance room and lunch room.

. Air circulation system located on the roof ; water cooling and heating pipes are encased in possible ABM which is covered with aluminum except at the joints. Flexible aluminum at the joints is deteriorating in some cases, in general the system is well maintained. The seals on the main housing for the system were all new 3 or 5 years ago according to Mr. Condon.

. Boiler Room; the insulation on the ceiling hot water pipes is possible ACM, and are original with the building according to Mr. Condon. They are sealed with paper-cloth wrap with minor deterioration at the ends of some of the joints.

. Chiller room; the insulation on the pipes is possible ACM. It is all original according to Mr. Condon. The insulation is deteriorating some sections. The unit has just been serviced and some section of insulation material has been pealed back and left hanging. The main circulation ducts are encased in an aluminum housing.

. Return air shaft room located on the roof; there is a problem with the liner covering the return air duct system leading throughout the building. Pieces of the insulating material are breaking off in chunks and traveling through the system to the difusers in the rooms throughout the building. this was observed in the difuser in the maintenance lunch room. The material is not identified. It did not appear in the building specifications book Mr. Condon had on hand, and a brand name was not visible in the undeteriorated sections. According to MR. Condon this material all has to be replaced.

. The electrical room and janitors closets have no visible ACBM. Due to the age of the building the accoustical ceiling tiles and nine inch floor tiles probably contain asbestos, however the condition of these items appears to be good. The ceiling tiles show normal wear with some chips in those that

have been moved for access to other systems, but wear is not excessive. The materials are not deteriorated.

Due to the age of this building, some asbestos containing materials are expected to be present. Those that are identified as possibe ACM or ACBM are in generally good condition. A detailed inspection of the building was not made.

APPENDIX F

RWQCB Letter Regarding Proposed Spieker Properties Acquisitions

an Francisco Bay
egional Water
Quality Control
oard

2101 Webster Street
Suite 500
akland, CA 94612
10) 286-1255
FAX (510) 286-1380

Pete Wilson
Governor

December 30, 1996
File No.: 2223.09 (SA)
SMS Case File

Spieker Properties
4900 Hopyard Road, Suite 120
Pleasanton, California 94588

Attention: Mr. John Winther

RE: Properties at 5801, 5855-5895 Christie Avenue, 5813-5815 Shellmound Street, and the Watergate Towers Complex property, Emeryville, Alameda County.

Dear Mr. Winther:

This letter contains San Francisco Bay Regional Water Quality Control Board (RWQCB) Staff's views on the environmental conditions at the above subject properties. We understand Spieker properties is considering acquisition of the properties. RWQCB Staff discussed the properties with representatives of Speiker Properties and Lathrop Properties at two meetings held on November 6, 1996, and December 3, 1996. Based on the meetings and review of information presented to us, we have the following views regarding the environmental conditions at the properties.

Properties at 5801, 5855-5895 Christie Avenue (Christie Avenue properties) and 5813-5815 Shellmound Street

1. The properties, located east of Interstate I-80, are within the area of the Emeryville Brownfield's Initiative. Historically the properties were owned by Fiberboard Corporation and it's predecessors. Environmental conditions beneath the Christie Avenue properties have not been documented. Based on historical information, it appears that the Christie Avenue properties were filled with industrial debris and soil similar to that placed west of Interstate I-80.

2. The Christie Avenue properties have not been under the RWQCB's regulatory oversight and are not listed in the RWQCB's site management system database. However, based on the RWQCB Staff's experiences with other sites in this area, we believe that the risk to human health and the environment is most likely acceptable because the sites are paved and any subsurface hazardous constituents that may be present are essentially in deep soil layers. If subsurface work (e.g.

current state of knowledge, it is unlikely that the site will come under the oversight of the RWQCB in the future. If and when the RWQCB develops a method to assess potential impacts of historical fill to San Francisco Bay, some additional assessment of potential releases of hazardous constituents from the site to the Bay may be required. It is unlikely that containment systems would be required.

2. The RWQCB staff consider the site to be an area of "random fill" and therefore not subject to reporting requirements under the California Code of Regulations, Title 23, Chapter 15. The site is currently not subject to RWQCB environmental regulatory oversight and that status is not likely to change in the future. The concern with the hazardous constituents in the fill relates primarily to metals contained in the fill and their potential mobility into the Bay. Further assessment of soluble constituents and the potential for their migration from the site to the Bay may be required if and/or when the RWQCB develops methods to assess similar sites around the Bay. The RWQCB recognizes the difficulty in differentiating between the potential contributions of hazardous constituents to the Bay from historical and current sources.

3. Since the site is located adjacent to the San Francisco Bay, any regulatory actions at the site should be based on protection of water quality, environment, and human health. Thus, the RWQCB is the appropriate agency for handling regulatory activities associated with the site.

We hope that this letter clarifies the RWQCB Staff's views on the properties. If you have any questions, please call Sumadhu Arigala at (510)-286-0434.

Sincerely,
Loretta K Barsamian,
Executive Officer

Stephen I. Morse
Stephen I. Morse, by DAM
Chief, Toxics Division.

cc: Curtis Scott, Landfills Section, RWQCB

Barbara Cook, DTSC
700 Heinz Avenue, Suite 200
Berkeley, CA 94710-2737

Charles Almestad, Golder Associates
1451 Harbor Bay Parkway, Suite 1000
Alameda, CA 94502

Bruce Klafter, Orrick Herrington & Sutcliffe
Old Federal Reserve Bank Building
400 Sansome Street, San Francisco, CA 94111-3143

FUTURE 5855-5895 CHRISTIE AVENUE SITE

FUTURE BAY BRIDGE PLAZA 5801 CHRISTIE AVENUE SITE

FUTURE 5813-5815 SHELLMOUND STREET SITE

THE PARAFFINE COMPANIES INC.

FORMERLY PARAFFINE PAINT CO.

LINOLEUM & TILE FACTORY

LINOLEUM BLENDING RM

MACHINE R'M

PLAY BUILDING

AUTO PARK

CAIENDER R'M

SIZING RM

VARNISH WORKS

TANK BLDG.

LINOLEUM RAW STOCK W. HO

LINOLEUM SCRATCH MIX W. HO

RAW MAT'L W. HO

MACHINE SHOP

ROCK & SLATE STGE & CARNIVAL

EMPLOYMENT OFF.

TIME OFF

POWELL

EAST SHORE

7' WIRE FENCE

APPROX. SCALE IN FEET

0 50 100

FIGURE 7

1950 SANBORN MAP

EMERYVILLE, CALIFORNIA

DWG ID: 963-7137.500

Golder Associates

FUTURE 5855-5895 CHRISTIE AVENUE SITE

FUTURE BAY BRIDGE PLAZA 5801 CHRISTIE AVENUE SITE

FUTURE 5813-5815 SHELLMOUND STREET SITE

ABOVE GROUND OIL TANKS

THE PARAFFINE COMPANIES INC.

POWELL

EAST SHORE

0 50 100

APPROX. SCALE IN FEET

FIGURE 8

1952 SANBORN MAP

EMERYVILLE, CALIFORNIA

DWG ID: 963-7137.500

Golder Associates

FUTURE 5855-5895
CHRISTIE AVENUE
SITE

FUTURE BAY BRIDGE PLAZA
5801 CHRISTIE AVENUE
SITE

FUTURE 5813-5815
SHELLMOUND STREET
SITE

CHRISTIE AV. (SHELLMOUND)

SHELLMOUND

POWELL

EAST SHORE

BOARD PAPER PRODUCTS CORP'N. - SUN & PAINT DIVN. - P'N. -
A REPORT SEE SHEET 307

2387

SERVICE STA. EQUIPT.

ELEC. SUPPLIES

ELECTRONIC SPECIALTY FACTY.

WOOD POSTS & BEAMS
L.W.G. SKYLTS

1657 POWELL

BOXCRAFT PAPER BOX CO.

FACTY. BLDG.
CENT. STA. SERVICE

MOTOR

FRT. STA

WOOD TRUSSES

METAL RUST PROOFG & PAINTG

METAL NAIL W NO

DENTAL MAT'L

2363A

TRUCK REPG

1550

1603

0 50 100
APPROX. SCALE IN FEET

FIGURE 9
1967 SANBORN MAP
EMERYVILLE, CALIFORNIA

DWG ID: 963-7137.500

Golder Associates