

Type of Services	Phase I Environmental Site Assessment
Location	10 Network Circle Menlo Park, California
Client	Roark Properties LLC
Client Address	1601 S. California Avenue Palo Alto, California 94304
Project Number	254-6-1
Date	November 3, 2010

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Type of Services
Location

Phase I Environmental Site Assessment
10 Network Circle
Menlo Park, California

SECTION 1: INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) performed at 10 Network Circle in Menlo Park, California (Site) as shown on Figures 1 and 2. This work was performed for Roark Properties LLC in accordance with our October 1, 2010 Agreement (Agreement). Cornerstone Earth Group, Inc. (Cornerstone) understands that Roark Properties LLC intends to purchase the Site for commercial/office uses.

1.1 PURPOSE

The scope of work presented in the Agreement was prepared in general accordance with ASTM E 1527-05 titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, "Standards and Practices for All Appropriate Inquiries; Final Rule" (AAI Rule). The purpose of this Phase I ESA is to strive to identify, to the extent feasible pursuant to the scope of work presented in the Agreement, Recognized Environmental Conditions at the property.

As defined by ASTM E 1527-05, the term Recognized Environmental Condition means the presence or likely presence of 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, ground water, or surface water on the property.

1.2 SCOPE OF WORK

As presented in our Agreement, the scope of work performed for this Phase I ESA included the following:

- A reconnaissance of the Site to note readily observable indications of significant hazardous materials releases to structures, soil or ground water.
- Drive-by observation of adjoining properties to note readily apparent hazardous materials activities that have or could significantly impact the Site.
- Acquisition and review of a regulatory agency database report of public records for the general area of the Site to evaluate potential impacts to the Site from reported contamination incidents at nearby facilities.

- Review of readily available information on file at selected governmental agencies to help evaluate past and current Site use and hazardous materials management practices.
- Review of readily available maps and aerial photographs to help evaluate past and current Site uses.
- Interviews with persons reportedly knowledgeable of existing and prior Site uses.
- Preparation of a written report summarizing our findings and recommendations.

The limitations for the Phase I ESA are presented in Section 10; the terms and conditions of our Agreement are presented in Appendix A.

1.3 ASSUMPTIONS

In preparing this Phase I ESA, Cornerstone assumed that all information received from interviewed parties is true and accurate. In addition, we assumed that all records obtained by other parties, such as regulatory agency databases, maps, related documents and environmental reports prepared by others are accurate and complete. We also assumed that the boundaries of the Site, based on information provided by Roark Properties LLC, are as shown on Figure 2. We have not independently verified the accuracy or completeness of any data received.

1.4 ENVIRONMENTAL PROFESSIONAL

This Phase I ESA was performed by Stason I. Foster, P.E., and Ron L. Helm, C.E.G., R.E.A. II, environmental professionals who meet the ASTM E 1527-05 qualifications.

SECTION 2: SITE DESCRIPTION

This section describes the Site as of the date of this Phase I ESA. The location of the Site is shown on Figures 1 and 2. Tables 1 through 3 summarize general characteristics of the Site and adjoining properties. The Site is described in more detail in Section 7, based on our on-Site observations.

2.1 LOCATION AND OWNERSHIP

Table 1 describes the physical location and ownership of the property, based on information provided by Roark Properties LLC. The Site is developed with nine commercial office buildings situated in a campus setting. The buildings are numbered 10 through 12 and 14 through 19. In addition to addresses associated with each numbered building, an address of 1601 Willow Road appears to have been associated with the Site.

Table 1. Location and Ownership

Assessor's Parcel No. (APN)	055-411-110, 120, 130 and 140
Reported Address and Building Size	10 Network Circle - 112,407 sq. ft. (2-story) 11 Network Circle - 46,262 sq. ft. (2-story) 12 Network Circle - 138,531 sq. ft. (3-story) 14 Network Circle - 137,612 sq. ft. (3-story) 15 Network Circle - 120,327 sq. ft. (2-story) 16 Network Circle - 171,751 sq. ft. (3-story) 17 Network Circle - 171,763 sq. ft. (3-story) 18 Network Circle - 112,384 sq. ft. (2-story) 19 Network Circle - 10,971 sq. ft. (1-story)
Construction Date	1993
Owner	Oracle, Inc.
Approximate Lot Size	60.3 acres*

* Site size reported by Oracle (see Appendix E)

2.2 CURRENT/PROPOSED USE OF THE PROPERTY

The current and proposed uses of the property are summarized in Table 2.

Table 2. Current and Proposed Uses

Current Use	Oracle (formerly Sun Microsystems) office space, computer hardware testing and fitness center
Proposed Use	Commercial office space

2.3 SITE SETTING AND ADJOINING SITE USE

Land use in the general Site vicinity appears to mainly be a mix of undeveloped salt evaporation ponds and commercial properties. Based on our Site vicinity reconnaissance, adjoining Site uses are summarized below in Table 3.

Table 3. Adjoining Site Uses

North	Salt evaporation ponds
South/Southeast	Highway 84, undeveloped land and public storage facility
West	Salt evaporation ponds

SECTION 3: USER PROVIDED INFORMATION

The ASTM standard defines the User as the party seeking to use a Phase I ESA to evaluate the presence of Recognized Environmental Conditions associated with a property. For the purpose of this Phase I ESA, the User is Roark Properties LLC.

3.1 CHAIN OF TITLE

A chain-of-title was not provided for our review.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

No information regarding environmental liens or activity and use limitations (AULs) was provided for our review.

3.3 SPECIALIZED KNOWLEDGE AND/OR COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The ASTM Standard requires that if the User is aware of any specialized knowledge and/or commonly known or reasonably ascertainable information within the local community about the Site that is material to Recognized Environmental Conditions, such as environmental liens, a significantly lower purchase price due to the property being affected by hazardous materials, or other conditions that are material to Recognized Environmental Conditions in connection with the Site, it is the User's responsibility to communicate such information to the environmental professional. Based on information provided by or discussions with Roark Properties LLC, we understand that Roark Properties LLC does not have such specialized knowledge and/or commonly known or reasonably ascertainable information regarding the Site.

3.4 REASON FOR PERFORMING PHASE I ENVIRONMENTAL SITE ASSESSMENT

We understand that Roark Properties LLC intends to purchase the Site for commercial use. We performed this Phase I ESA to support Roark Properties LLC in evaluation of Recognized Environmental Conditions at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions at the Site.

SECTION 4: RECORDS REVIEW

4.1 DOCUMENTS PROVIDED BY ORACLE

To help evaluate the presence of Recognized Environmental Conditions at the Site, Cornerstone reviewed and relied upon the documents provided by Oracle listed in Table 4. Please note that Cornerstone cannot be liable for the accuracy of the information presented in these documents. Significant information presented in these documents is summarized below. Copies of the documents are attached in Appendix F.

Table 4. Documents Provided by Oracle

Date	Author	Title
May 1987	Raychem	Raychem East Campus Master Plan, Menlo Park, California
July 1990a	Wahler Associates	Preliminary Geotechnical Services, Proposed R&D Complex, Raychem Corporation East Campus Site
July 20, 1990b	Wahler Associates	Environmental Review of McLaren Engineering Report and Site Assessment on Raychem Corporation's East Campus Site, Menlo Park, California
October 25, 1990c	Wahler Associates	Additional Site Investigation, Raychem East Campus Site, Menlo Park, California
March 20, 1992	Wahler Associates	Raychem East Campus Property Environmental Update Survey, Menlo Park, California
April 9, 1992a	Treadwell & Rollo, Inc.	Geotechnical Investigation, Sun Microsystems, Menlo Park, California
July 31, 1992b	Treadwell & Rollo, Inc.	Supplemental Geotechnical Investigation Surcharge Program, Sun Microsystems, Menlo Park, California
March 18, 1993a	Wahler Associates	Revised Environmental Assessment Update, Former Raychem East Campus Site, Menlo Park, California
June 9, 1993b	Wahler Associates	Groundwater Sampling and Chemical Analysis for Nickel, Former Raychem East Campus Property, Menlo Park, California
February 8, 1994	Wahler Associates	Status of Groundwater Monitoring Wells, Sun Menlo Park Campus, Willow Road and Bayfront Expressway, Menlo Park, California
March 24, 1995	Anderson Environmental Management	Progress Report, Monitoring and Agricultural Well Project, Sun Microsystems Menlo Park Campus
Issued: 9-1-06 Expires: 9-1-11	San Mateo County Environmental Health Department (SMCEHD)	Permit for above ground tanks, storage of hazardous materials (< 1,999 gal) and generation of hazardous waste (<1 ton per year).
September 10, 2007	Delta	Groundwater Monitoring Well Destruction Report, Sun Microsystems, Inc., 10-18 Network Circle, Menlo Park, California
2008	Oracle/Sun	Waste Characterization Spread Sheet
September 2009	Delta	Spill Prevention, Control and Countermeasure Plan for Sun Microsystems, Inc., 1601 Willow Road, Menlo Park, California
2010	Oracle/Sun	Monthly Waste Inventory
March 10, 2010	Sun Microsystems, Inc. (Sun)	Hazardous Materials Business Plan, Sun Microsystems, Inc., 1601 Willow Road, Menlo Park, California
Expires: 4-1-12	Bay Area Air Quality Management District	Permit to Operate (9 emergency generators)

Note: Please review the attached documents for a more complete assessment of the Site.

4.1.1 Reported Site History

Based on the information reviewed, the Site historically consisted of tidal marshland associated with San Francisco Bay (Raychem, 1987). The first levees reportedly were constructed around the Site before 1946 in connection with salt evaporation pond construction (Wahler, 1990a). The levees reportedly were raised in 1965 to an elevation of approximately 5 feet above mean sea level (msl). During 1968, the sloughs and ditches that traversed the Site reportedly were filled with recompacted bay mud and varying amounts of compacted fill.

The Site previously was owned by Raychem and was referred to as Raychem's East Campus. Raychem, founded in 1957, was a materials science company (now part of Tyco Electronics Corporation) that developed and supplied high-performance products for aerospace, automotive, construction, electronics, electrical power, process and telecommunication industries. Raychem also owned the approximately 82 acres to the southwest of the Site that extended from Chilco Drive on the west to Willow Road on the east – just to the south of the Bayshore Expressway (referred to as the Raychem's West Campus). As discussed in Section 4.2.1, the Raychem West Campus is an open case under Department of Toxic Substances (DTSC) oversight.

A prior Master Plan (Raychem, 1987) indicated that Raychem planned to develop the Site for commercial use. Since 1975, the Site reportedly was subjected to a complex program of preparation, raised building pad construction and surcharging, all in response to changing master plan building configurations and phasing schedule assumptions.

In 1980, the property line along the southern boundary of the Site was realigned to accommodate the CalTrans approach to the Dumbarton Bridge from Marsh Road. In 1982, a concrete utility tunnel, together with a vehicular and pedestrian underpass, was constructed under Route 84 between the Site and Raychem's West Campus located on the opposite side of Route 84. A signalized intersection at Willow Road was constructed in 1984.

The Site reportedly flooded in 1983 when a combination of heavy rains, winds and high tides caused bay waters to breach the levees (Raychem, 1987). In 1984, the perimeter levees reportedly were raised to an elevation of approximately 10 feet msl. Wahler (1990a) reported that subsequent settlement lowered the levee elevations to approximately 8½ feet at some locations.

In 1990, prior to construction of the current on-Site buildings, approximately 4 to 8 feet of imported fill were noted to be present on-Site (Wahler, 1990a). At the time of Wahler's Site Assessment (1990b), several improvements to the Site were noted in the preparation for future development, including construction of levees, importation of fill material and construction of several building pads.

Treadwell & Rollo (1992a) reported fill thicknesses of approximately 2 to 9 feet. Approximately 3 to 11 feet of native soft compressive clay (Bay Mud) reportedly underlies the fill. Ground water reportedly was encountered at the base of the fill (at approximately msl).

Plans for the current on-Site commercial office complex were developed during the early 1990s (Treadwell & Rollo, 1992b).

4.1.2 Prior Environmental Studies

Wahler (1990b) reviewed an April 20, 1990 report by McLaren Engineering (McLaren); the McLaren report was not made available for our review. Wahler reported that previous work at the Site by McLaren indicated no significant chemical use, handling, storage, or disposal on-Site. It was reported that minor chemical usage had occurred, associated with storage of vehicles and equipment on-Site during nearby construction activities. Wahler also noted, "a great deal of fill from unidentified sources has been placed on-site during Raychem's ownership of the site".

The McLaren Environmental Assessment (as summarized by Whaler 1993a), referred to the reported detonation of unstable laboratory chemicals. According to Mr. Jim Charley, the Environmental Program Manager at Raychem, the detonation activities consisted of four to five cardboard boxes of containers of organic peroxides. Dr. Charley reportedly stated that organic peroxides are almost completely consumed during detonation due to their high reactivity and any remaining material after detonation would likely oxidize leaving little to no residue.

In January 1990, McLaren collected and analyzed soil samples from four borings (MW-1, MW-2, MW-3 and SB-1) and four hand auger locations (HA-1 through HA-4). SB-1 was located in the vicinity of monitoring well MW-5. The hand auger samples were reportedly located in the vicinity of previously detonated unstable chemicals (Wahler, 1990b). Ground water samples also were collected from monitoring wells MW-1, MW-2 and MW-3. These samples were analyzed for volatile organic compounds (VOCs) and semi-VOCs, oil and grease, total petroleum hydrocarbons (TPH) and Title 22 metals. The specific laboratory results and datasheets from the McLaren study were not readily available for review; however, McLaren reportedly concluded that ground water quality did not appear impacted from on- or off-Site activities. Whaler (1990b) reported that the McLaren report noted that 'hydrocarbons and phenanthrene were identified in shallow soil samples of the fill at less than hazardous levels'; nickel reportedly was identified in all soil samples; the concentrations were reported by Whaler as 'relatively uniform and may represent native concentrations in fill'. However, Whaler also stated, 'McLaren's soil sample analyses also indicated somewhat elevated levels of nickel in shallow soil (fill) throughout the site'.

In May 1990, Wahler sampled ground water from MW-1 and collected soil in the vicinity of McLaren's boring SB-1 at approximately 1 to 1 ½ feet below the surface (SS-1). The laboratory analyses of these samples 'generally verified McLaren's findings with similar results.' No hydrocarbons or VOCs were reported in the ground water sample. Methylene chloride was detected in ground water (2.6 parts per billion [ppb]) but because the trip blank also contained a similar concentration of methylene chloride, Wahler indicated that its presence likely was due to laboratory contamination. TPH as diesel was reported in soil at a 23 parts per million (ppm). However, an elevated concentration of nickel was detected in SS-1. Total and soluble nickel were detected at 950 and 59 ppm, respectively. The Total Threshold Limit Concentration (TTLC) and Soluble Threshold Limit Concentration (STLC) for nickel are 2,000 and 20 ppm, respectively. The TTLC and STLC are the concentrations above which a solid waste is considered hazardous per Title 22 of the California Code of Regulations. Thus, the detected soluble nickel concentration exceeded the STLC.

In June 1990, Wahler advanced eight shallow soil borings (DH-1 through DH-8) and installed two additional ground water monitoring wells (MW-4 and MW-5). Ground water samples from these wells were analyzed for VOCs and nickel. No VOCs were detected. Nickel was detected in the ground water sampled from MW-4 (at 0.063 ppm). For comparison, the California

drinking water maximum contaminant level (MCL, commonly termed drinking water standard) for nickel is 0.1 parts per million (ppm, California Department of Public Health [2010]). The soil samples collected from well borings MW-4 and MW-5 and from eight additional borings (a total of 18 soil samples) were analyzed for nickel. Total nickel was detected at up to 590 ppm and soluble nickel was detected at up to 9 ppm. Soil samples collected from MW-4 and MW-5 also were analyzed for TPHd, which was detected at 1.9 and 5.0 ppm, respectively.

In September 1990, to further evaluate the extent of nickel in soil, Wahler (1990c) advanced four additional borings (B-1 to B-4) near former sample location SS-1, where nickel was detected at concentrations exceeding California's hazardous waste criteria. Two soil samples were analyzed from each boring. Nickel concentrations were detected between 41 and 82 ppm. Ground water monitoring wells MW-1, MW-4 and MW-5 also were re-sampled; no VOCs were reported in the ground water samples.

In March 1992, Wahler collected ground water samples from four of the on-Site wells; the samples were analyzed for VOCs and TPHd. Monitoring well MW-3 was not sampled due to an obstruction in the well. No VOCs were detected. TPHd was detected at 0.120 ppm in ground water from MW-2 (Wahler, 1992).

Selected wells were sampled again in September 1992 and May 1993 (Wahler, 1993a and 1993b). During the first sampling event, TPHd was detected in MW-2 at 0.250 ppm and nickel at 0.180 ppm was detected in an unfiltered ground water sample from MW-1. Wahler indicated that because the nickel sample was unfiltered, the result for nickel in MW-1 may be artificially high due to nickel adsorbed to soil particles in the well water. Analysis of ground water from MW-1 detected acetone at 0.022 ppm. Wahler noted that acetone has not been detected in on-Site ground water during prior sampling events and that it is a common laboratory contaminant. During the May 1993 sampling event, a filtered ground water sample was collected from MW-1 and analyzed for nickel, which was not detected above the detection limit of 0.050 ppm.

Two of the wells were destroyed in 1993 and the remaining three wells were destroyed in 2007; the well abandonment activities reportedly were performed in accordance with SMCEHD guidelines (Wahler, 1994 and Delta, 2007).

4.1.3 Reported Hazardous Materials Use/Storage by Sun Microsystems

Based on the provided Spill Prevention, Control and Countermeasure Plan (SPCCP) and Hazardous Materials Business Plan (HMBP), diesel fuel is stored on-Site within emergency generators (in double walled above ground tanks). The SPCCP listed six generators with a total diesel storage capacity of approximately 1,680 gallons. Note, however, that nine generators were listed on the current Bay Area Air Quality Management District (BAAQMD) operating permit (Figure 2).

The SPCCP also identified 17 elevators located throughout the on-Site buildings that contain a total of approximately 1,753 gallons of hydraulic fluid (between approximately 64 and 144 gallons per elevator). One 55-gallon drum of waste oil is also noted, along with approximately 300 gallons of kitchen grease. Transformer oil reportedly is present within the eight electrical transformers that are owned by Pacific Gas & Electric; these transformers reportedly are periodically inspected for leaks as part of normal facility maintenance activities. The HMBP indicated that lead-acid batteries are additionally used on-Site. The HMBP also stated that no underground storage tanks (USTs) are present. The provided waste inventory information

indicated that various wastes are generated including batteries, mercury-containing light bulbs, used generator oil, used refrigerants and refrigerant oils.

4.2 STANDARD ENVIRONMENTAL RECORD SOURCES

Cornerstone contracted with a firm specializing in the computerized search of environmental regulatory databases to evaluate the likelihood of contamination incidents at and near the Site. The databases and search distances were in general accordance with the requirements of ASTM E 1527-05. A list of the database sources reviewed, a description of the sources, and a radius map showing the location of reported facilities relative to the project Site are presented in Appendix B.

Based on the information presented in the agency database report, no off-Site facilities were reported that appear likely to significantly impact ground water beneath the Site. The potential for impact was based on our interpretation of the types of incidents, the location of the reported incidents in relation to the Site and the assumed ground water flow direction.

4.2.1 Sun Microsystems and SLIC Database

Sun Microsystems is listed on the Regional Water Quality Control Board (Water Board) spills, leaks, investigation and cleanup (SLIC) database. The case status is listed as "open-inactive." To obtain additional information regarding the SLIC case, Cornerstone obtained a copy of the documents contained in the Water Board file (see Appendix G). Based on our review, the SLIC case appears to have been opened after a DTSC non-emergency hazardous substance release report was submitted to the Water Board by Rust Environmental (consultant for Sun Microsystems) in 1994. The release report summarizes the results of sampling conducted at the Site to evaluate nickel concentrations in on-Site soil; these prior studies are described in Sections 4.1.2 and 4.3.1.

Other database listings for Sun Microsystems at the Site address of 1601 Willow Road indicate that the facility has obtained permits from San Mateo County related to above ground storage tanks (ASTs), storage of hazardous materials, and for generation of hazardous waste.

4.2.2 Raychem/Tyco, 300 Constitution Drive

Raychem at 300 Constitution Drive (Property) is identified on several databases; soil and ground water are noted to have been impacted on this Property, which is located across Bayfront Expressway (Route 84), southwest of the project Site. Prior to Raychem's ownership, the Property primarily was undeveloped marshland with an asphalt batch plant located in the central portion of the Property.

Raychem entered in a Corrective Action Consent Agreement (Consent Agreement) with DTSC in June 1996 to initiate the required RCRA Facility Investigation. Tyco entered into another Consent Agreement with DTSC in September 2000 and further amended it on December 31, 2001. As outlined in the Consent Agreement, Raychem/Tyco was required to perform the following:

- Interim Measures (IM)
- RCRA Facility Investigation (RFI)
- Corrective Measure Study (CSM)
- Remedy Selection
- Corrective Measures Implementation

From 1981 to 1998, over twenty environmental assessments and investigations were performed at the Property by various consultants. From 1999 through 2003, Tyco conducted several Property-wide investigations (RFI activities) to gather data regarding potential subsurface chemical impacts and subsurface stratigraphy. This work was conducted according to the RFI Work Plan approved in 1999.

The RFI identified localized areas of contaminated soils and concluded that most of the releases likely occurred in the 1970s and 1980s. Elevated concentrations of PCBs, VOCs and Semi-VOCs were encountered at a number of locations at the Property with the main area of contamination located at the former ChemPlant. The probable sources of contamination were attributed to leaks and spills from above-ground storage tanks and piping, below-ground sumps, releases from drum storage areas and waste management practices employed in the past by the facility.

Ground water investigations were conducted between 1999 and 2004 at the Property. The investigations indicated that ground water contamination appeared generally limited to the Property. In addition, natural attenuation of ground water contaminants appeared to be occurring; contaminant concentrations are anticipated to continue to decrease in ground water with time. Interim remedial measures conducted on-Site and natural attenuation processes have reduced the ground water contaminant plume in size and concentrations of VOCs.

Based on our review of readily available documents pertaining to the Raychem/Tyco Property, past chemical releases do not appear likely to have significantly impacted soil or ground water quality below the Oracle/Sun Microsystems Site.

4.3 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

The following additional sources of readily ascertainable public information for the Site also were reviewed during this Phase I ESA.

4.3.1 City and County Agency File Review

Cornerstone requested available files pertaining to the Site addresses (10 through 19 Network Circle and 1601 Willow Road) at following public agencies; the Menlo Park Building Department (MPBD) and the San Mateo County Environmental Health Department (SMCEHD). Copies of selected documents are provided in Appendix G.

SMCEHD Files: The SMCEHD files contained copies of several of the documents listed in Table 4 along with Hazardous Materials Business Plans (HMBPs) indicating that the Site has been occupied by Sun Microsystems since 1994. The hazardous materials listed in HMBPs dated between 2008 and 2010 were generally consistent with those described in Section 4.1.3. Additional hazardous materials were listed on HMBPs dated between 1995 and 2007. These included methanol, acetone, isopropyl alcohol, paints, rubber cement solvent and thinner,

refrigerants, refrigerant and vacuum pump oils, and various other adhesives, laundry detergents and janitorial cleaning supplies. The materials were listed as being stored in relatively small quantities, typically consisting of containers with capacities of 1 to 5 gallons or smaller. SMCEHD inspection reports dated between 1994 and 2009 did not list any violations that would be indicative of significant hazardous materials spills.

A hand written note contained in the SMCEHD file indicated that nickel concentrations identified in on-Site soil in 1990 were re-investigated in 1994 and revealed concentrations below the STLC and TTLC. The note additionally stated that "the site does not need to be opened," presumably indicating that the detected nickel concentrations did not warrant opening a hazardous materials/spill incident case.

The referenced 1994 report, prepared by Rust Environmental (formerly Wahler Associates), was contained in the file; a copy of the report is attached in Appendix G. Rust (1994) summarized the prior work, as described above in Section 4.1.2, and also summarized another study conducted by Tetra Tech in September 1994.

Tetra Tech collected fourteen soil samples (ranging in depth from approximately 2 ½ feet to 3 ½ feet) and analyzed them for nickel. Two samples exceeded the STLC. Tetra Tech concluded, 'Based on the results of soil analyses for nickel, some of which exceeds the concentrations at which the State defines waste materials as hazardous waste, there is a potential for some site soils to be classified as hazardous waste'. Tetra Tech also sampled the ground water from two monitoring wells; one sample had a concentration of nickel 'slightly above' the MCL and the rest were below the MCL.

Rust additionally collected fifteen soil samples near two locations where nickel was identified by Tetra Tech in soil at concentrations exceeding the STLC. Rust also collected a ground water sample from well MW-5. Nickel concentrations detected in soil did not exceed the STLC. Nickel was not detected in the ground water sample. Rust concluded that 'concentrations of nickel in site soils is naturally occurring in the construction fill and aggregate brought to the site, (probably from within the Bay Watershed), as nickel concentrations are low, consistent with naturally occurring levels, and there is no known or suspected man-made source for the elemental nickel in the fill and aggregate'. The average total nickel concentration in all soil samples collected up to the date of the Rust report (60 samples) was indicated as 166.7 ppm. None of the total nickel concentrations exceeded the TTLC. Soluble nickel concentrations exceeding the STLC were detected in only three samples. Table 1 contained within the 1994 Rust report presents a summary of the previously detected nickel concentrations in soil and ground water at the Site (Appendix G).

MPBD Files: The MPBD files contained building plans, permits and other correspondence related to the initial construction of the current on-Site buildings and subsequent tenant improvements/alterations; occupancy of the buildings by Sun Microsystems was indicated. Due to the large number of documents at the MPBD (thousands of pages), a detailed review of each could not be reasonably performed within the scope of this investigation; thus, only a cursory review was conducted.

SECTION 5: PHYSICAL SETTING

We reviewed readily available geologic and hydrogeologic information to evaluate the likelihood that chemicals of concern released on a nearby property could pose a significant threat to the Site and/or its intended use.

5.1 RECENT USGS TOPOGRAPHIC MAP

A 1997 USGS 7.5 minute topographic map was reviewed to evaluate the physical setting of the Site. The Site's elevation is shown to be approximately msl. Note, however, that Treadwell & Rollo (1992b) indicated that the planned final grades associated with the current on-Site development were to be between approximately 6 and 9 feet above msl. The elevations reported by Treadwell & Rollo are likely to be more representative of current conditions. Topography in the vicinity of the Site slopes gently to the north, towards the San Francisco Bay.

5.2 HYDROGEOLOGY

Prior studies noted that ground water was encountered at an elevation of approximately msl. Variable ground water flow directions (predominantly in the north-northwesterly direction but also in the southerly direction) have been measured at the Site, possibly related to tidal influences (Wahler, 1993).

SECTION 6: HISTORICAL USE INFORMATION

The objective of the review of historical use information is to develop a history of the previous uses of the Site and surrounding area in order to help identify the likelihood of past uses having led to Recognized Environmental Conditions at the property. The ASTM standard requires the identification of all obvious uses of the property from the present back to the property's first developed use, or back to 1940, whichever is earlier, using reasonably ascertainable standard historical sources.

6.1 HISTORICAL SUMMARY OF SITE

The historical sources reviewed are summarized below. The results of our review of these sources are summarized in Table 5.

- **Historical Aerial Photographs:** We reviewed aerial photographs dated 1943, 1956, 1965, 1974, 1982, 1993, 1998 and 2005 obtained from Environmental Data Resources, Inc. (EDR) of Milford, Connecticut; copies of aerial photographs reviewed are presented in Appendix C.
- **Historical Topographic Maps:** We reviewed USGS 15-minute and 7.5-minute historic topographic maps dated 1899, 1902, 1943, 1947, 1948, 1953, 1961, 1968, 1973, 1991 and 1997; copies of historic topographic maps reviewed are presented in Appendix C.
- **Historical Fire Insurance Maps:** EDR reported that the Site was not within the coverage area of fire insurance maps.
- **Local Street Directories:** We reviewed city directories obtained from EDR that were dated from 1977 to 2008 to obtain information pertaining to past Site occupants; the city directory summary is presented in Appendix D.

Table 5. Summary of Historical Source Information for Site

Date	Source	Comment
1899, 1902 and 1943	Topographic maps	The Site is depicted as tidal marshlands associated with San Francisco Bay.
1943	Aerial photograph	The Site is shown as tidal marshlands associated with San Francisco Bay.
1947	Topographic map	The Site is depicted as tidal marshlands associated with San Francisco Bay.
1948 and 1953	Topographic map	The Site is depicted as tidal marshlands associated with San Francisco Bay. Levees appear to have been constructed along the north and western sides of the Site.
1956	Aerial photograph	The Site is shown as tidal marshlands associated with San Francisco Bay with levees on the north and west sides.
1961	Topographic map	The Site appears similar to that shown on the 1953 topographic map.
1965	Aerial photograph	The Site is shown as tidal marshlands associated with San Francisco Bay with levees on the north and west sides.
1968 and 1973	Topographic maps	The Site appears similar to that shown on the 1953 topographic map.
1974	Aerial photograph	Fill appears to have been placed on-Site. No structures are apparent.
1982	Aerial photograph	Additional fill placement and earthwork activities are apparent on-Site.
1991	Topographic map	No Site features are depicted.
1993	Aerial photograph	Construction of several of the current on-Site commercial buildings appears to be in progress.
1997	Topographic map	No Site features are depicted.
1998 and 2005	Aerial photographs	The Site appears to be developed with the current buildings.
2008	City Directory	Occupant listed as Sun Microsystems (1601 Willow Street)

6.2 HISTORICAL SUMMARY OF SITE VICINITY

Based on our review of the information described in Section 6.1, the general Site vicinity appears to have been undeveloped during the early 1900s. By the 1940s, an increase in development generally to the south of the Site is apparent (within the cities of East Palo Alto and Menlo Park). Further increases in both residential and commercial development on nearby property to the south of the Site are apparent on subsequent aerial photographs and topographic maps.

SECTION 7: SITE RECONNAISSANCE

We performed a Site reconnaissance to evaluate current Site conditions and to attempt to identify Site Recognized Environmental Conditions. The results of the reconnaissance are discussed below. Additional Site observations are summarized in Table 6 in Section 7.2. Photographs of the Site are presented in Section 7.2.1.

7.1 METHODOLOGY AND LIMITING CONDITIONS

To observe current Site conditions (readily observable environmental conditions indicative of a significant release of hazardous materials), Cornerstone staff Stason I. Foster, P.E. visited the Site on October 21, 2010 and was accompanied by Oracle staff (Mr. Doug Bartl, Senior Facilities Manager and Aurelio Andico, Operations Manager). Cornerstone staff only observed those areas that were reasonably accessible, safe, and did not require movement of equipment, materials or other objects. Due to the size of the campus, it was not feasible to view each room within the buildings; alternatively, an attempt was made to observe representative areas of the campus, with a focus on those areas where hazardous materials are used or stored.

7.2 OBSERVATIONS

At the time of our visit, the Site was developed with nine commercial buildings situated in a campus setting. The buildings were numbered 10 through 12 and 14 through 19. The Site was occupied by Sun Microsystems, which was acquired by Oracle in January, 2010. Mr. Bartl indicated that the campus had a capacity for approximately 3,500 employees and that only a few hundred currently occupied the buildings. The buildings were observed to be used primarily for office purposes. Typical office building features were observed including employee break rooms/common areas, restrooms, conference rooms and lobby areas. Several laboratories also were located throughout the buildings that were observed to be used for testing of computer system hardware. The laboratories resembled computer server rooms typical of most commercial office buildings, although on a larger scale. Two cafeterias with kitchens also were present, one in Building 11 and the other in Building 18. Building 19 was observed to be a fitness center for on-Site employees.

Two to three elevators were observed in each of the on-Site buildings, except for Building 19, and consisted of both passenger and freight elevators. Representative elevator equipment rooms were observed to contain hydraulic and mechanical equipment for the elevators. The observed equipment appeared to be in good conditions and no evidence of hydraulic fluid leaks was readily apparent. Mr. Andico indicated that the elevators are serviced by an outside vendor on a regular basis and that he was not aware of any prior issues that would be indicative of hydraulic fluid leaks.

Nine emergency generators were observed on-Site, each with an integral, double-walled, above ground diesel storage tank. The generators were observed to be located on concrete pads or pavement. No evidence of diesel fuel leaks was readily apparent. Mr. Bartl indicated that seven of the generators provided emergency power for life safety systems, while the remaining two provide emergency power to computer laboratories.

A loading dock was observed on the southeast side of Building 11. Smaller loading docks were observed between Buildings 10 and 12, between Buildings 14 and 16, and between Buildings 17 and 18. A hydraulic powered trash compactor was observed on concrete pavements at each of the loading docks. The hydraulic fluid reservoirs for the trash compactors appeared to be single-walled integral tanks with capacities of between 25 and 50 gallons. No evidence of hydraulic fluid leaks was readily apparent.

Typical janitorial cleaning supplies were observed in janitorial closets within the buildings. Additionally, isopropyl alcohol, water soluble and VOC-free soldering flux, and static control mat cleaner were observed in a hazardous materials storage cabinet in one of the hardware laboratories. These materials were observed to be stored in retail plastic containers with 1-

quart and 1-gallon capacities. Mr. Bartl indicated that the alcohols and soldering compounds are used in small quantities for occasional cleaning and soldering of electrical components within the hardware testing laboratories. Lead-acid batteries associated with uninterruptible power supply (UPS) systems also were observed in the laboratories. The batteries were located within secondarily contained cabinets. Laundry detergents used for washing towels were observed in a laundry room in Building 19 (the fitness center); several 5-gallon plastic containers were present. No evidence of hazardous materials spills or leaks within the buildings was readily apparent.

Other hazardous materials observed on-Site appeared to be associated mainly with facility maintenance activities and for operation of the roof-mounted building heating and cooling systems (chillers, natural gas powered boilers and air handling units). These materials were located within an exterior fenced area on the southeast side of Building 11. The observed materials included descalers, corrosion inhibitors, vacuum pump oil, refrigeration oil, waste oil, various refrigerants (R-22, R-134A, R-404A and R-410A), compressed gas cylinders (oxygen, nitrogen and acetylene), paints, paint thinner, and miscellaneous other lubricants, adhesives and cleaners. Metal and plastic cans of gasoline (approximately 20 gallons total) also were observed that reportedly are used for operation of landscaping equipment. The observed hazardous materials were stored mainly in metal and molded polyethylene hazardous materials cabinets/enclosures with integral secondary containment sumps. The refrigerant and compressed gas cylinders were stored on shelving and on underlying pavement and were secured by chains. Waste oil was contained in a 55-gallon drum, while the other materials were generally in plastic containers with capacities ranging from 1-quart to 5-gallons; several aerosol cans also were present. No evidence of hazardous materials spills or leaks was readily apparent.

Two below ground grease collection sumps were observed on-Site, associated with the two kitchen facilities. One sump was located on the western side of Building 18 and the other was located near the loading dock of Building 11. Mr. Andico indicated that the grease sumps are pumped out by a vendor on a periodic basis. A below ground sanitary sewer sump and lift pump system also was located near the loading dock of Building 11.

Pad-mounted electrical transformers owned by PG&E were observed at several exterior locations on-Site, mainly near the loading dock and generator locations. The transformers appeared to be in good condition and no transformer oil leaks were readily apparent. Other exterior areas of the Site consisted of landscaped courtyard areas (centrally enclosed between the buildings) and asphalt paved vehicle drives and parking areas.

Table 6. Summary of Readily Observable Site Features

General Observation	Comments
Aboveground Storage Tanks	Diesel tanks associated with generators and hydraulic fluid tanks associated with trash compactors
Agricultural Wells	Not Observed
Air Emission Control Systems	Not Observed
Boilers	Roof-mounted; natural gas fueled boilers associated with building heating systems
Burning Areas	Not Observed
Chemical Mixing Areas	Not Observed
Chemical Storage Areas	Observed as described above
Clean Rooms	Not Observed
Drainage Ditches	Not Observed
Elevators	Observed as described above
Emergency Generators	Observed as described above
Equipment Maintenance Areas	Not Observed
Fill Placement	Reported to be present (see Section 4.0)
Ground Water Monitoring Wells	Not Observed; several monitoring wells were decommissioned
High Power Transmission Lines	Not Observed
Hoods and Ducting	Not Observed
Hydraulic Lifts	Not Observed
Incinerator	Not Observed
Petroleum Pipelines	Not Observed
Petroleum Wells	Not Observed
Ponds or Streams	Not Observed
Railroad Lines	Not Observed
Row Crops or Orchards	Not Observed
Stockpiles of Soil or Debris	Not Observed
Sumps or Clarifiers	Two grease collection sumps associated with kitchens
Transformers	Observed as described above; reportedly owned by PG&E
Underground Storage Tanks	Not Observed
Vehicle Maintenance Areas	Not Observed
Vehicle Wash Areas	Not Observed
Wastewater Neutralization Systems	Not Observed

The comment "Not Observed" does not warrant that these features are not present on-Site; it only indicates that these features were not readily observed during the Site visit.

7.2.1 Site Photographs



Photograph 1. Exterior of Building 10



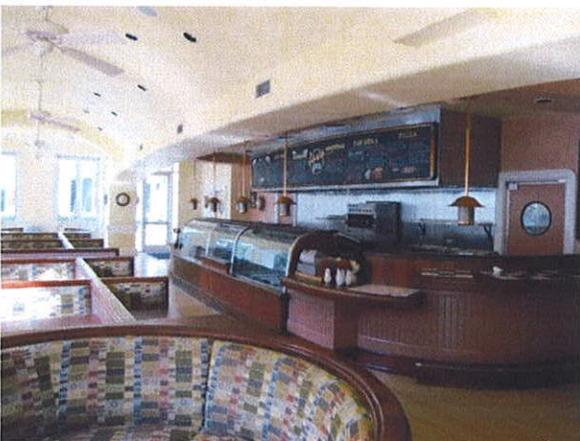
Photograph 2. View of courtyard area.



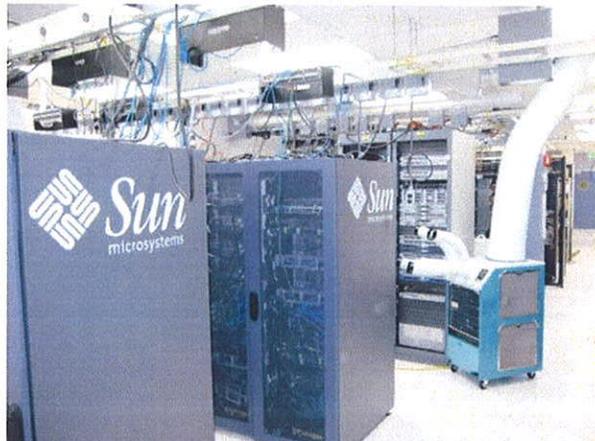
Photograph 3. Interior offices (typical)



Photograph 4. Conference room



Photograph 5. Kitchen/Cafeteria



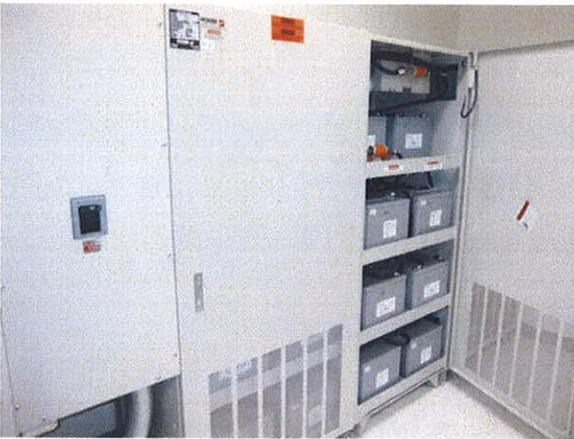
Photograph 6. Hardware testing laboratory (typical)



Photograph 7. Fitness Center (Building 19)



Photograph 8. Laundry room in Building 19.



Photograph 9. Batteries in UPS cabinet



Photograph 10. Emergency generator (1 of 9)



Photograph 11. Trash compactor.



Photograph 12. Elevator hydraulic equipment



Photographs 13 and 14. Exterior hazardous materials storage area (southeast side of Building 11)

SECTION 8: INTERVIEWS

8.1 ENVIRONMENTAL QUESTIONNAIRE AND OWNER/OCCUPANT INTERVIEWS

To help obtain information on current and historical Site use and use/storage of hazardous materials on-Site, we provided an environmental questionnaire to the Site owner (Oracle). A copy of the completed questionnaire is attached in Appendix E. Interviews with Oracle staff (Mr. Doug Bartl, Senior Facilities Manager and Aurelio Andico, Operations Manager) also were conducted during our Site visit. Based on our review of the completed questionnaire and discussions with Oracle staff, the Site was purchased by Sun Microsystems in 1991. The on-Site buildings reportedly were constructed in 1993 and occupied by Sun Microsystems for office and hardware testing purposes. Oracle reportedly acquired Sun Microsystems in January 2010. Other information presented on the questionnaire appears consistent with the Site conditions observed during our visit and was described above in Section 7.2.

8.2 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS

Contact information for previous Site owners and occupants was not provided to us. Therefore, interviews with previous Site owners and occupants could not be performed. We understand that the Site consisted of undeveloped land prior to construction of the current buildings.

SECTION 9: CONCLUSIONS (FINDINGS) AND RECOMMENDATIONS

Roark Properties LLC reportedly intends to purchase the Site for commercial use. Cornerstone performed this Phase I ESA to support Roark Properties LLC in evaluation of Recognized Environmental Conditions. Our conclusions and recommendations are summarized below.

9.1 HISTORICAL SITE USAGE

Based on the information obtained during this study, the Site historically consisted of tidal marshland associated with San Francisco Bay. The first levees appear to have been constructed around the Site during the mid-1940s; the levees reportedly were raised in 1965 and again in 1984. During 1968, the sloughs and ditches that traversed the Site reportedly were filled. Additional fill was placed on-Site during the 1970s and 1980s. The Site was previously owned by Raychem and referred to as Raychem's East Campus property. Building pads for a

planned Raychem development were constructed on-Site during the 1980s; Raychem's plan was later abandoned, and the Site was acquired by Sun Microsystems in 1991. The current on-Site buildings were constructed beginning in 1993 and have since been occupied by Sun Microsystems mainly for office and computer hardware testing purposes.

9.2 CHEMICAL STORAGE AND USE

As described in prior sections of this report, chemical use and storage at the Site consists mainly of diesel fuel contained in emergency generators; hydraulic fluid contained in elevators and trash compactors; lead-acid batteries associated with UPS systems; refrigerants and water treatment chemicals associated with the operation of the roof-mounted building heating and cooling systems; a variety of janitorial and facility maintenance products; and transformer oil within electrical transformers. Alcohols and soldering compounds also are used in small quantities for occasional cleaning and soldering of electrical components within the hardware testing laboratories. No evidence of hazardous materials spills or leaks was readily apparent at the time of our Site visit.

Facilities containing hazardous materials should be periodically inspected for leaks or other damage as part of normal Site maintenance activities. Appropriate procedures and control measures should be taken by vendors that service the elevators and transformers to minimize incidental spills or releases of oil. Spill equipment should be kept readily available near the emergency generators to absorb or contain releases, if any.

Based on the reported quantity of hazardous materials being stored on-Site, preparation of a Spill Prevention, Control and Countermeasure Plan (SPCCP) is required by Federal and State regulations. The SPCCP establishes instructions and guidelines for the prevention, control and mitigation of hazardous materials spills or releases from a facility with the objective of protecting the environment and health and safety of on-Site employees.

9.3 SOIL QUALITY

9.3.1 Reported Nickel Concentrations in Soil

As described in Sections 4.1.2 and 4.3.1, several studies of on-Site soil quality were completed between 1990 and 1994. Nickel was identified as being potentially elevated in on-Site fill material; thus, most of the soil sampling conducted focused on evaluation of nickel concentrations. The reports reviewed indicate that 60 samples were collected and analyzed for total nickel. The highest detected total nickel concentration was 1,200 ppm. The average total nickel concentration was reported as 166.7 ppm.

The reported nickel data were compared to the California Human Health Screening Levels (CHHSLs) (Cal/EPA, September 2010). The CHHSLs are used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas or indoor air at concentrations below the corresponding CHHSLs can be assumed not to pose a significant health risk. Please note that the Water Board (2008) has also developed Environmental Screening Levels (ESLs). The ESLs are a compilation of screening levels for not only risk to human health but a number of other environmental concerns. In addition, naturally occurring background concentrations of metals, such as arsenic - amongst others, in soil may exceed their respective CHHSLs. Cal/EPA generally does not require cleanup of soil to below background concentrations. This

issue is frequently encountered with arsenic. Thus, nickel also was compared to regional background levels (Scott, 1991).

The CHHSLs for total nickel in soil on residential and commercial properties are 1,600 and 16,000 ppm, respectively. The total nickel concentrations detected in on-Site soil do not exceed the residential or commercial CHHSLs. Similarly, the total nickel concentrations do not exceed the TTLC, which for nickel is 2,000 ppm. The average concentration of nickel (166.7 ppm) did exceed the commercial and residential ESL (150 ppm) but not the direct exposure ESL (300 ppm). Scott (1991) reported natural background nickel concentrations in the southern Bay area from 6 to 145 ppm. Published analyses of nickel contents in bedrock units in the southern Bay area include several for serpentinite, partially serpentinized ultramafic igneous rock and associated rocks; these rocks have relatively high concentrations of nickel. Bailey and Everhart (1964) reported that serpentinite and associated altered and mineralized silica-carbonate rock in the New Almaden district contained 800 to 2,000 ppm of nickel.

The STLC for nickel is 20 ppm. If the total nickel concentrations in a sample exceeded 10 times the STLC (i.e., 200 ppm), then in most cases the samples also were analyzed for soluble nickel. A factor of 10 is commonly used to compensate for a 1:10 dilution factor used during the analyses for soluble analytes. Fifteen samples containing the greatest concentrations of total nickel were analyzed for soluble nickel, which was detected at up to 60 ppm and exceeded the STLC in 3 of the samples analyzed. Forty-two other samples presumably did not contain soluble nickel above the STLC based on the total nickel concentrations within those samples (i.e., the total nickel concentrations were less than 200 ppm).

The Site is identified as "open-inactive" case on the Water Board's SLIC database. Based on the reported nickel concentrations and the lack of action required by the Water Board, in our opinion, the nickel concentrations do not appear to pose a significant threat to human health. Furthermore, a hand written note contained in the SMCEHD file indicated that based on the nickel concentrations detected "the site does not need to be opened," presumably indicating that the detected nickel concentrations do not warrant opening a hazardous materials/spill incident case under SMCEHD oversight.

9.3.2 Other Analyte Concentrations in Soil

In addition to nickel, a few soil samples collected during prior studies also were analyzed for VOCs, semi-VOCs and petroleum hydrocarbons. TPHd was detected at concentrations of 1.9, 5.0 and 23 ppm. No CHHSL for TPHd has been established; however, the ESL for TPHd is 83 ppm. Thus, the TPHd concentrations detected do not appear to pose a significant threat to human health.

9.4 FILL

In 1990, prior to construction of the current on-Site buildings, approximately 4 to 8 feet of imported fill were noted to be present on-Site (Wahler, 1990a). At the time of Wahler's Site Assessment (1990b), several improvements to the Site that required the import of fill were noted for future development, including construction of levees and building pads. Treadwell & Rollo (1992a) reported fill thicknesses of approximately 2 to 9 feet.

As discussed above, the laboratory analyses previously performed on fill samples included several common contaminants (i.e., VOCs, semi-VOCs, TPH and metals). However, as the source of the fill is undocumented, there may be other contaminants present, such as organochlorine pesticides, or pockets of contamination not detected due to the limited testing

performed by others. Because the Site is now capped by the existing buildings and associated paved parking areas, risk to human health from residual chemicals, if any, would be significantly reduced. However, elevated residual chemical concentrations in soil can pose construction worker health and safety concerns and increase costs to dispose of excess soil. Thus, if renovation or demolition activities involving earthwork are planned, consideration should be given to performing soil sampling and analytical testing in specific work areas to further evaluate if residual chemicals are present.

9.5 GROUND WATER QUALITY

Five ground water monitoring wells were previously installed on-Site and periodically sampled. Ground water samples from selected wells were analyzed for VOCs, TPHg, TPHd, BTEX and nickel. No VOCs were detected except for methylene chloride (up to 0.0034 ppm) and acetone (0.022 ppm), which were noted to be common laboratory contaminants and appear unlikely to be associated with an on-Site chemical release. Similarly, TPHg and BTEX compounds were not detected. TPHd was sporadically detected during the well sampling events at concentrations up to 0.250 ppm.

Nickel also was sporadically detected in ground water (up to 0.180 ppm); the greatest detected concentration was in an unfiltered sample. For comparison, the California drinking water maximum contaminant level (MCL) for nickel is 0.1 ppm. Note that shallow ground water below the Site is not used as a drinking water source.

The nickel and TPHd concentrations detected in ground water do not appear to pose a significant threat to human health and are not likely to adversely impact the planned commercial use of the Site.

Two of the wells were destroyed in 1993 and the remaining three wells were destroyed in 2007; the well abandonment activities reportedly were performed in accordance with SMCEHD guidelines.

9.6 ASBESTOS CONTAINING MATERIALS (ACMS)

Because the buildings were constructed during the 1990s, most building materials are unlikely to contain significant quantities of asbestos. However, if demolition, renovation, or re-roofing of the buildings is planned, an asbestos survey may be required by local authorities or National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable ACBMs prior to building demolition or renovation that may disturb the ACBM.

9.7 LEAD-BASED PAINT

The Consumer Product Safety Commission banned the use of lead as an additive in paint in 1978. Based on the age of the buildings, the potential for lead-based paint to be present appears low.

9.8 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY

Based on the information obtained during this study, no hazardous material incidents have been reported in the Site vicinity that would be likely to significantly impact the Site. However, as is typical to many commercial areas, several facilities in the vicinity were reported as hazardous

materials users. If leaks or spills occur at these facilities, contamination could impact the Site, depending upon the location of the property, the magnitude of the release, and the effectiveness of cleanup efforts.

9.9 DATA GAPS

ASTM Standard Designation E 1527-05 requires the environmental professional to comment on significant data gaps that affect our ability to identify Recognized Environmental Conditions. A data gap is a lack of or inability to obtain information required by ASTM Standard Designation E 1527-05 despite good faith efforts by the environmental professional to gather such information. A data gap by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. The following data gaps were identified:

- Contact information for the former owners of the Site was not provided to us; thus, interviews with former owners were not performed.

The Site history appears to have been established based on information obtained from other data sources; thus, the above data gap is not considered to be significant.

9.10 DATA FAILURES

As described by ASTM Standard Designation E 1527-05, a data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Data failures are not uncommon when attempting to identify the use of a Site at five year intervals back to the first use or to 1940 (whichever is earlier). ASTM Standard Designation E 1527-05 requires the environmental professional to comment on the significance of data failures and whether the data failure affects our ability to identify Recognized Environmental Conditions. A data failure by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. No significant data failures were identified during this Phase I ESA.

9.11 RECOGNIZED ENVIRONMENTAL CONDITIONS

Cornerstone has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E 1527-05 of 10 Network Circle, Menlo Park, California. This assessment identified the following Recognized Environmental Conditions; however, please read the entire report for an overview of the Site.

- Nickel was identified as present in elevated concentrations in on-Site fill material obtained from undocumented sources. In addition, due to these elevated nickel concentrations, the Site is an "open-inactive" case on the Water Board's SLIC database.

SECTION 10: LIMITATIONS

Cornerstone performed this Phase I ESA to support Roark Properties LLC in evaluation of Recognized Environmental Conditions associated with the Site. Roark Properties LLC understands that no Phase I ESA can wholly eliminate uncertainty regarding the potential for Recognized Environmental Conditions to be present at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions. Roark Properties LLC understands that the extent of information obtained is based on the reasonable limits of time and budgetary constraints.

Conclusions presented in this report are based on selected, readily available information and conditions readily observed at the time of the Site visit. Phase I ESAs are inherently limited because findings are developed based on information obtained from a non-intrusive Site evaluation. Cornerstone does not accept liability for deficiencies, errors, or misstatements that have resulted from inaccuracies in the publicly available information or from interviews of persons knowledgeable of Site use. In addition, publicly available information and field observations often cannot affirm the presence of Recognized Environmental Conditions; there is a possibility that such conditions exist. If a greater degree of confidence is desired, soil, ground water and/or soil vapor samples should be collected by Cornerstone and analyzed by a state-certified laboratory to establish a more reliable assessment of environmental conditions.

Cornerstone acquired an environmental database of selected publicly available information for the general area of the Site. Cornerstone cannot verify the accuracy or completeness of the database report, nor is Cornerstone obligated to identify mistakes or insufficiencies in the information provided (ASTM E 1527-05, Section 8.1.3). Due to inadequate address information, the environmental database may have mapped several facilities inaccurately or could not map the facilities. Releases from these facilities, if nearby, could impact the Site.

Roark Properties LLC may have provided Cornerstone environmental documents prepared by others. Roark Properties LLC understands that Cornerstone reviewed and relied on the information presented in these reports and cannot be responsible for their accuracy.

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Type of Services	Phase I Environmental Site Assessment
Location	312-314 Constitution Drive Menlo Park, California 94025-1111
Client Client Address	Giant Properties, LLC 1601 South California Avenue Palo Alto, California 94304
Project Number Date	254-5-1 November 19, 2010

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FIGURE 11 – TOTAL VOCs IN GROUND WATER (BETA WATER BEARING ZONE 2007)

APPENDICES

APPENDIX A – DTSC AND SMCEHD FILES

APPENDIX B – DATABASE SEARCH REPORT

APPENDIX C – HISTORIC AERIAL PHOTOGRAPHS AND MAPS

APPENDIX D – LOCAL STREET DIRECTORY SEARCH RESULTS

Type of Services
Location

Phase I Environmental Site Assessment
312-314 Constitution Drive
Menlo Park, California 94025-1111

SECTION 1: INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) performed at 312-314 Constitution Drive in Menlo Park, California (Site) as shown on Figures 1 and 2. This work was performed for Giant Properties, LLC in accordance with our October 8, 2010 Agreement (Agreement). Cornerstone Earth Group, Inc. (Cornerstone) understands that Giant Properties, LLC (Giant Properties) intends to purchase the Site for continued commercial (office) use and future commercial (office) redevelopment.

1.1 PURPOSE

The scope of work presented in the Agreement was prepared in general accordance with ASTM E 1527-05 titled, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, "Standards and Practices for All Appropriate Inquiries; Final Rule" (AAI Rule). The purpose of this Phase I ESA is to strive to identify, to the extent feasible pursuant to the scope of work presented in the Agreement, Recognized Environmental Conditions at the property.

As defined by ASTM E 1527-05, the term Recognized Environmental Condition means the presence or likely presence of 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, ground water, or surface water on the property.

1.2 SCOPE OF WORK

As presented in our Agreement, the scope of work performed for this Phase I ESA included the following:

- A reconnaissance of the Site to note readily observable indications of significant hazardous materials releases to structures, soil or ground water.
- Drive-by observation of adjoining properties to note readily apparent hazardous materials activities that have or could significantly impact the Site.
- Acquisition and review of a regulatory agency database report of public records for the general area of the Site to evaluate potential impacts to the Site from reported

contamination incidents at nearby facilities.

- Review of readily available information on file at selected governmental agencies to help evaluate past and current Site use and hazardous materials management practices.
- Review of readily available maps and aerial photographs to help evaluate past and current Site uses.
- Preparation of a written report summarizing our findings and recommendations.

The limitations for the Phase I ESA are presented in Section 10.

1.3 ASSUMPTIONS

In preparing this Phase I ESA, Cornerstone assumed that all information received from the seller is true and accurate. In addition, we assumed that all records obtained by other parties, such as regulatory agency databases, maps, related documents and environmental reports prepared by others are accurate and complete. We also assumed that the boundaries of the Site, based on information provided by Giant Properties, are as shown on Figures 1 and 2. We have not independently verified the accuracy or completeness of any data received.

1.4 ENVIRONMENTAL PROFESSIONAL

This Phase I ESA was performed by Stason I. Foster, P.E., and Ron L. Helm, C.E.G., R.E.A. II, environmental professionals who meet the ASTM E 1527-05 qualifications.

SECTION 2: SITE DESCRIPTION

This section describes the Site as of the date of this Phase I ESA. The location of the Site is shown on Figures 1 and 2. Tables 1 through 3 summarize general characteristics of the Site and adjoining properties. The Site is described in more detail in Section 7, based on our on-Site observations.

2.1 LOCATION AND OWNERSHIP

Table 1 describes the physical location, and ownership of the property, based on information provided by Giant Properties. The approximately 22-acre Site consists of two parcels (western and eastern) with addresses of 312, 313 and 314 Constitution Drive. Buildings at 312 and 313 Constitution Drive are currently present on the western parcel. Former buildings on the eastern parcel had a reported address of 314 Constitution Drive.

Table 1. Location and Ownership

Assessor's Parcel No. (APN)* and Approximate Lot Size	055-260-130 (13.497 acres) 055-260-140 (8.497 acres)
Reported Address/Location	312-314 Constitution Drive, Menlo Park, California
Current Owner	Argonaut Holdings, Inc. Acquired from Tyco Electronics in March 2007
Approximate Building Size	312 Constitution Drive – 58,887 sq. ft. 313 Constitution Drive – 60,622 sq. ft.
Approximate Construction Date	312 Constitution Drive – 1983 313 Constitution Drive – 1988

* Parcel numbers also were listed as 055-260-210-4 and 055-260-220-3 in the preliminary title report discussed in Section 3.2.

2.2 CURRENT/PROPOSED USE OF THE PROPERTY

The current and proposed uses of the property are summarized in Table 2.

Table 2. Current and Proposed Uses

Current Use	Commercial – office use and vacant land
Proposed Use	Commercial – Office use

2.3 SITE SETTING AND ADJOINING SITE USE

Based on our Site vicinity reconnaissance, adjoining Site uses are summarized below in Table 3.

Table 3. Adjoining Site Uses

North	Salt Evaporation Ponds across Bayshore Expressway
South	Industrial/Commercial Properties and Vacant Land across Railroad Right-of-Way; Single Family Homes across Hamilton Avenue
East	Industrial/Commercial Property and Vacant Land
West	Industrial/Commercial Property (Tyco Electronics)

SECTION 3: USER PROVIDED INFORMATION

The ASTM standard defines the User as the party seeking to use a Phase I ESA to evaluate the presence of Recognized Environmental Conditions associated with a property. For the purpose of this Phase I ESA, the User is Giant Properties.

3.1 CHAIN OF TITLE

A chain-of-title was not provided for our review.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

A preliminary title insurance commitment report (title report) prepared by First American Title Insurance Company dated May 29, 2008 was provided to us by Giant Properties and Colliers International (real estate broker).

Based on the provided document, the Site is owned by Argonaut Holdings, Inc. (Argonaut Holdings) and was acquired in March 2007 from Tyco Electronics Corporation (Tyco).

The title report identifies several easements, agreements and covenants that are noted to be associated with the Site. A copy of a document titled "Covenant to Restrict Use of Property Environmental Restriction" recorded January 19, 2007 as Instrument No. 2007-009472 was provided for our review by the seller's agent, Colliers International, and also was identified during our review of Department of Toxic Substances Control (DTSC) files. This Covenant restricts certain uses of the Site due to the presence of impacted soil and ground water, which resulted from past chemical use, storage and handling by Raychem Corporation (Raychem). The 22-acre Site was formerly part of a larger approximately 82-acre Raychem facility. Raychem reportedly merged with Tyco in 1999. A copy of the Covenant is attached in Appendix A. The land use restrictions are further discussed below in Section 4.2.8.

Some of the other easements and agreements identified in the title report appear to be related to utilities; however, the purpose of others was not clearly indicated.

3.3 SPECIALIZED KNOWLEDGE AND/OR COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The ASTM Standard requires that if the User is aware of any specialized knowledge and/or commonly known or reasonably ascertainable information within the local community about the Site that is material to Recognized Environmental Conditions, such as environmental liens, a significantly lower purchase price due to the property being affected by hazardous materials, or other conditions that are material to Recognized Environmental Conditions in connection with the Site, it is the User's responsibility to communicate such information to the environmental professional. Based on information provided by or discussions with Giant Properties, we understand that Giant Properties is aware that the Site is subject to certain land use restrictions resulting from the presence of impacted soil and ground water.

3.4 REASON FOR PERFORMING PHASE I ENVIRONMENTAL SITE ASSESSMENT

We understand that Giant Properties intends to purchase the Site for continued commercial (office) use and potential future commercial (office) redevelopment. We performed this Phase I ESA to support Giant Properties in evaluation of Recognized Environmental Conditions at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions at the Site.

SECTION 4: RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Cornerstone contracted with a firm specializing in the computerized search of environmental regulatory databases to evaluate the likelihood of contamination incidents at and near the Site. The databases and search distances were in general accordance with the requirements of ASTM E 1527-05. A list of the database sources reviewed, a description of the sources, and a radius map showing the location of reported facilities relative to the project Site are presented in Appendix B.

Raychem at 300 Constitution Drive is identified on several databases; soil and ground water are noted to have been impacted. As previously mentioned, the 22-acre project Site was formerly

part of the larger approximately 82-acre Raychem facility. Information reviewed during this study indicates that addresses between 300 and 314 Constitution Drive have been associated with the former Raychem facility.

Based on the information presented in the agency database report, no other off-Site facilities were reported that appear likely to significantly impact ground water beneath the Site. The potential for impact was based on our interpretation of the types of incidents, the location of the reported incidents in relation to the Site and the assumed ground water flow direction.

4.2 DTSC FILE REVIEW

To obtain additional information regarding the reported hazardous material releases on the Raychem property, we reviewed documents available in the Envirostor database (<http://www.envirostor.dtsc.ca.gov>). The Envirostor database is maintained by the DTSC and contains information on investigation, cleanup, permitting, and corrective actions that are planned, being conducted or have been completed under DTSC’s oversight. Our review focused on those documents pertaining to the on-Site portion of the former Raychem facility, which is comprised of the easternmost 22-acres of the former Raychem property and is known as "Expanded Area 6."

Because of the lengthy and complex Site history, a large volume of environmental documents pertaining to the Site has been generated over the past 20 to 30 years. A detailed review of each document was not feasible within the time and budget constraints of this Phase I ESA. A significant portion of the existing documents, but not all, were obtained during this study. A cursory review of the documents obtained was performed and, based on our professional judgment, those documents that appeared to be of greater relevance were selected for further evaluation. Our review focused on recent documents prepared for the Site (many of which summarized prior studies), along with agency correspondence documenting the completion of remedial actions, and documents describing on-going institutional controls and land use restrictions that are applicable to the Site. The documents summarily reviewed are listed below in Table 4; a summary of information contained in the documents is presented in the following sections. Copies of selected documents are attached in Appendix A; these documents should be reviewed in detail for a more complete understanding of the environmental setting of the Site.

Table 4. Documents Obtained from DTSC/Envirostor Database

Date	Author	Title
November 2010	EEC	Summary of Current Environmental Conditions, Menlo Park, 312, 313 and 314 Constitution Drive, Menlo Park, California
August 2, 2010	DTSC	Untitled – Approving the 2010 Annual Inspection Report
May 19, 2010	DTSC	Untitled – Approving the DRAFT Ground Water Monitoring Report of February 2010
March 24, 2010	GRA Associates, Inc.	Transmittal of DRAFT Report Ground Water Monitoring, February 2010 Tyco Electronics Corp, 3300 Constitution Drive, Menlo Park, CA
August 3, 2009	DTSC	Annual Groundwater Report, Tyco Electronics, 300 Constitution Drive, Menlo Park, CA
July 2, 2009	DTSC	Groundwater Monitoring Report, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA

Table 4 (Continued). Documents Obtained from DTSC/Envirostor Database

Date	Author	Title
June 25, 2009	DTSC	Annual Inspection Report, Tyco Electronics Corp, 300 Constitution Drive, Menlo Park, CA
February 12, 2009	SCS Engineers	Annual Inspection Report – Covenant to Restrict Use of Property, Tyco Electronics Corporation Facility, 300 Constitution Drive, Menlo Park, CA
February 2008	GRA Associates, Inc.	Ground Water Monitoring of January 2008, Tyco Electronics Corp, 300 Constitution Drive, Menlo Park, CA
April 30, 2007	GRA Associates, Inc.	Transmittal of Report, Ground Water Monitoring, March 2007, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
April 18, 2007	DTSC	Approval of Reports, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
April 2007	GRA Associates, Inc.	Report, Ground Water Monitoring of February 2007, Raychem/Tyco Electronics, 300 Constitution Drive, Menlo Park, CA
March 2007	SCS Engineers	Completion Report, Demolition of Buildings N and U, Electrical Substation, and Relocation of Portions of Electrical Substation, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
March 2007	SCS Engineers	Summary Report, Soil Sampling/Removal/Disposal, Post Demolition of Buildings/Structures, Eastern Portion (Expanded Area 6), Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
February 7, 2007	SCS Engineers	Annual Inspection Report – Covenant to Restrict Use of Property, Tyco Electronics Corporation Facility, 300 Constitution Drive, Menlo Park, CA
January 29, 2007	SCS Engineers	Workplan, Soil Removal/Disposal Demolition of Buildings/Structures, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
December 6, 2008	DTSC	Notice of Determination-Confirmation of Filing-12/5/2006
November 30, 2006	DTSC	Notice of Decision for Corrective Action Final Remedy Selection
November 28, 2006	DTSC	Response to Comments, Corrective Action Final Remedy Selection, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
November 30, 2006	DTSC	Notice of Decision for Corrective Action Final Remedy Selection at Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
November 2006	SCS Engineers	Corrective Measures Study and Implementation Plan, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
September 19, 2006	EEC	Phase II Environmental Site Assessment, Tyco Electronics, 312, 313, and 314 Constitution Drive, Menlo Park, California
July 10, 2006	DTSC	Technical Completeness Determination of Corrective Measures Study and Implementation Plan, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
July 2006	DTSC	Statement of Basis, Proposed Remedy Selection for Contaminated Soil and Groundwater at Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
July 2006	DTSC	Proposed Remedies for Soil & Groundwater, Tyco Electronics Menlo Park Facility
June 13, 2006	USEPA	Retraction of April 13, 2006, 40 CFR 761.61(c) Risk-Based Cleanup and Disposal Approval for Tyco Electronics Corporation, 300 - 314 Constitution Drive, Menlo Park, CA

Table 4 (Continued). Documents Obtained from DTSC/Envirostor Database

Date	Author	Title
June 14, 2006	SCS Engineers	Operation, Maintenance and Monitoring Plan, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
July 2005	SCS Engineers	Baseline Human Health Risk Assessment Eastern Portion of Site (Expanded Area 6) Tyco Electronics (Former Raychem) Facility, 300 Constitution Drive, Menlo Park, CA
September 27, 2005	ECC	Phase I Environmental Site Assessment, Tyco Electronics, 312, 313, & 314 Constitution Drive, Menlo Park, California
April 26, 2005	DTSC	Closure Report, Soil Removal/Disposal, Off-Site Storm Water Swale Area, Railroad Right-of-Way South of Tyco Facility's East End, 300 Constitution Drive, Menlo Park, CA
December 15, 2004	SCS Engineers	Closure Report Soil Removal/Disposal Off-Site Storm Water Swale Area Railroad Right-of-Way South of Tyco Facility's East End, 300 Constitution Drive, Menlo Park, CA
October 5, 2004	DTSC	Approval of Final Workplan Soil Removal/Disposal Off-Site Storm Water Swale Area Railroad Right-of-Way South of Tyco Facility's East End, 300 Constitution Drive, Menlo Park, CA
October 4, 2004	DTSC	RCRA Facility Investigation Report Approval – Report Results of Soil Sampling, Railroad Right-of-Way, Near Willow Road, Menlo Park, CA
September 2004	GRA Associates, Inc.	Report, Results of Soil Sampling Railroad Right-of-Way, Near Willow Road, Menlo Park, CA
September 10, 2004	SCS Engineers	Final Workplan, Soil Removal/Disposal Off-Site Storm Water Swale Area Railroad Right-of-Way South of Tyco Facility's East End, 300 Constitution Drive, Menlo Park, CA
September 9, 2004	DTDC	Approval of the Conceptual Workplan Soil Removal/Disposal Off Site Storm Water Swale Area Railroad Right-of-Way South of Tyco Facility's East End, 300 Constitution Drive, Menlo Park, CA
June 4, 2004	DTSC	Conditional Approval of Soil Sampling Plan, Railroad Right-of-Way South of the Tyco Facility, Tyco Electronics Corporation, 300 Constitution Drive, Menlo Park, CA
September 2003	GRA Associates, Inc.	Report – Assessment of Off-Site Soils, Sediments, and Surface Water Volume I of II (Test, Figures and Tables) Raychem / Tyco Facility, 300 Constitution Drive, Menlo Park, CA
October 7, 2002	DTSC	Approval of RCRA Facility Investigation (RFI) Report – Soil, Expanded Area 6, Tyco Electronics Corporation (Formerly Raychem), 300 Constitution Drive, Menlo Park, CA
November 2002	GRA Associates, Inc.	RFI Ground Water Report Volume I (Text) Raychem / Tyco Electronics, 300 Constitution Drive, Menlo Park, CA
March 2002 (Revised and Updated from February 2001)	GRA Associates	RFI Report – Soil Investigation (Final) Volume I (Text) Raychem/Tyco Facility – Expanded Area 6 (Eastern Portion of Site) 300 Constitution Drive, Menlo Park, CA
January 4, 2002	SCS Engineers	Interim Remedial Measures Addendum #4 Implementation Summary Area 6 (Chem Plant) Tyco Electronics Corporation 300 Constitution Drive, Menlo Park, CA
February 19, 2001	SCS Engineers	Interim Measures Implementation and Buildings P & Y Demolition Report – Area 6 Volume 1 of 3
September, 1989	DTSC	Raychem Corporation, 300 Constitution Drive, Menlo Park, CA RCRA Facility Assessment

4.2.1 Site Description and History

Raychem, founded in 1957, was a materials science company (now part of Tyco Electronics Corporation [Tyco]) that developed and supplied high-performance products for aerospace, automotive, construction, electronics, electrical power, process and telecommunication industries.

Raychem purchased approximately 40 acres of land in 1965 and initiated construction of a manufacturing facility. By 1968, Raychem increased land ownership to approximately 82 acres; the term "Property" is used in this report to reference the 82 acre Raychem facility. Raychem gradually expanded the Property with buildings extending from Chilco Drive on the west to near Willow Road on the east. Tyco merged with Raychem in 1999.

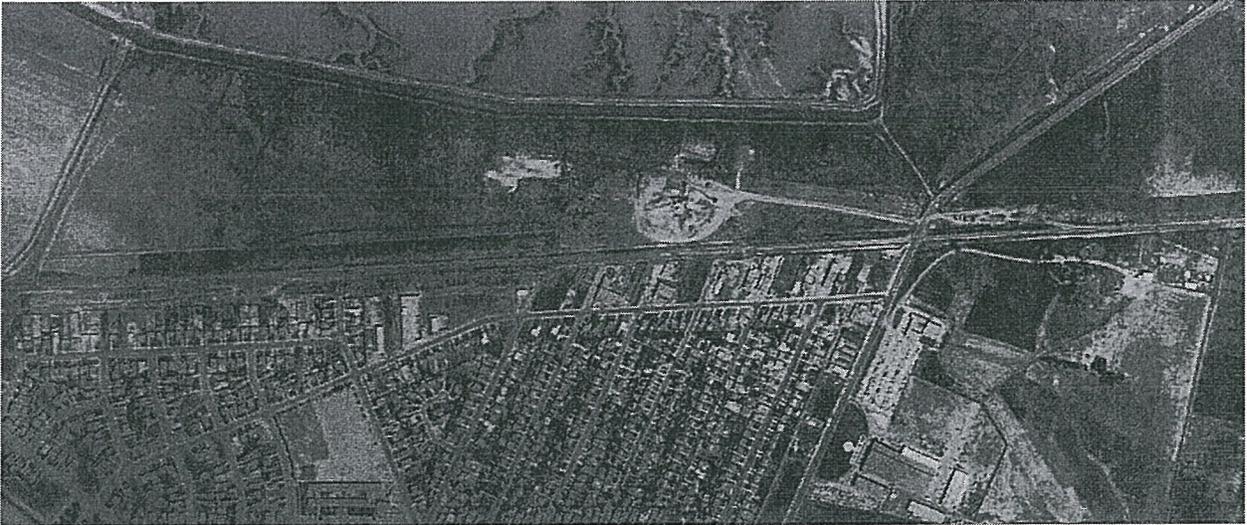
Prior to Raychem's ownership, the Property primarily was undeveloped marshland with an asphalt batch plant located in the central portion of the Property (in the general area of Buildings I and J). Based on documents reviewed by ECC (2005), the asphalt batch plant was dismantled between October 1969 and June 1971. An aerial photograph dated 1957 overlaid onto a Site plan shows the approximate location of Buildings I and J relative to the former asphalt plant (Figure 3).

The Site is located on the eastern portion of the Raychem Property (known as Expanded Area 6). The western area of the Property is known as Areas 1 through 5. Operations began in Area 6 in approximately 1968. The Areas 1 through 6 divisions were based on clustering buildings and grounds with similar manufacturing processes and uses. Area 6 (commonly referred to as the ChemPlant) previously included a Hazardous Waste Transfer Depot, an Omega Wastewater Treatment System, several solid waste management units (SWMUs), a process wastewater sump, a Therminol Heater/Dowtherm Boiler and five buildings (Buildings N, O, P, U and Y).

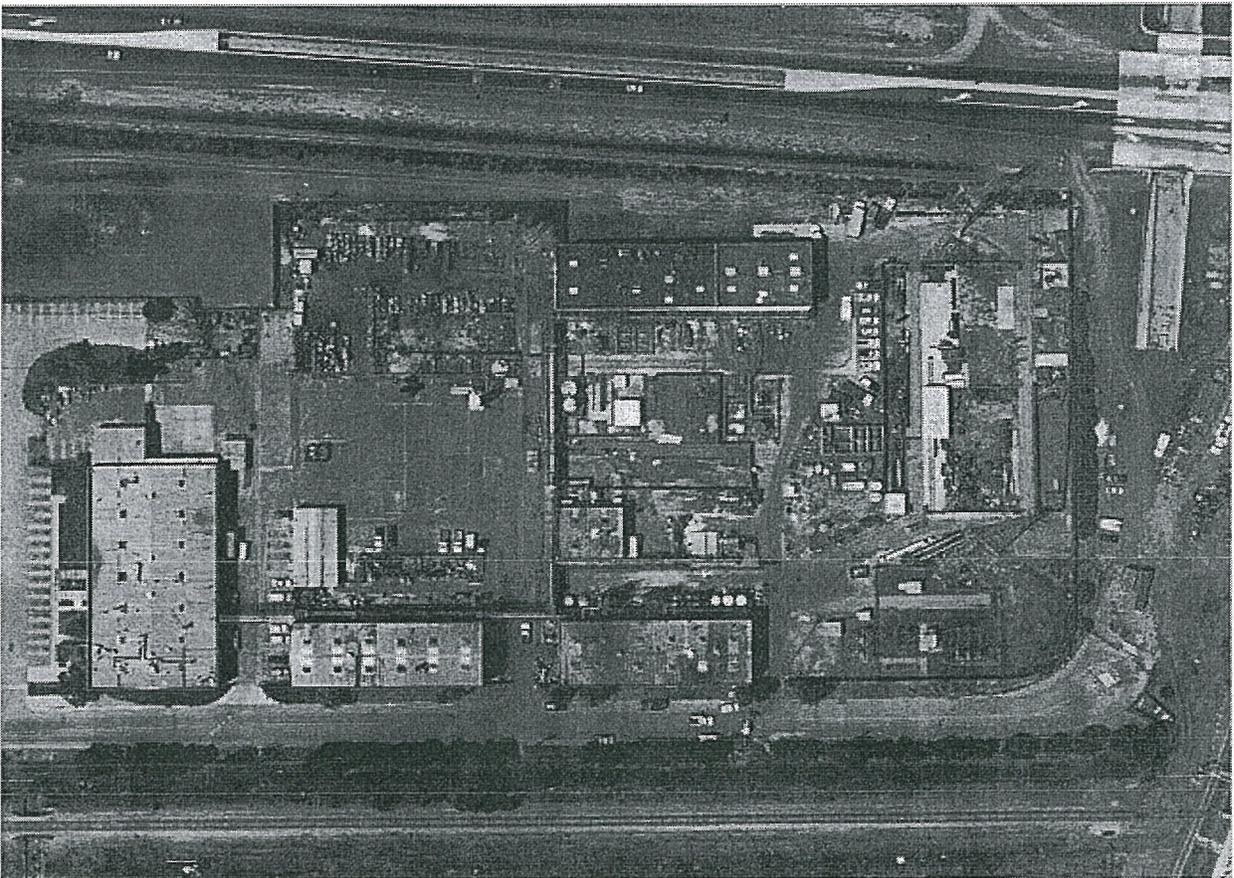
Buildings I and J were constructed on-Site during the 1980s; in the mid-2000s, these building were added to "Area 6" to form "Expanded Area 6" (Site). Buildings I and J reportedly were used as office buildings and not used for R&D or manufacturing purposes. According to ECC (2005), Buildings I and J were vacated after Tyco acquired Raychem. Tyco leased Building I to Interwave Communications Inc., who reportedly used the building for general office space from approximately 2000 to 2003. Building I reportedly has been vacant since 2003. Tyco leased Building J to Applicast, Inc., who reportedly used the Building for general office space from approximately 2000 to 2002. Building J reportedly has been vacant since 2002. Currently, only the two approximately 60,000 square foot office buildings (Buildings I and J) are located on-Site; the other buildings have been demolished to prepare the Site for potential sale and redevelopment.

Historic photographs taken in 1957, 1988 and 1990 that show the undeveloped marshland with the asphalt batch plant and the subsequent development of the eastern portion of the Site are shown on the following pages; other historic aerial photographs are described in Section 6 and presented in Appendix C.

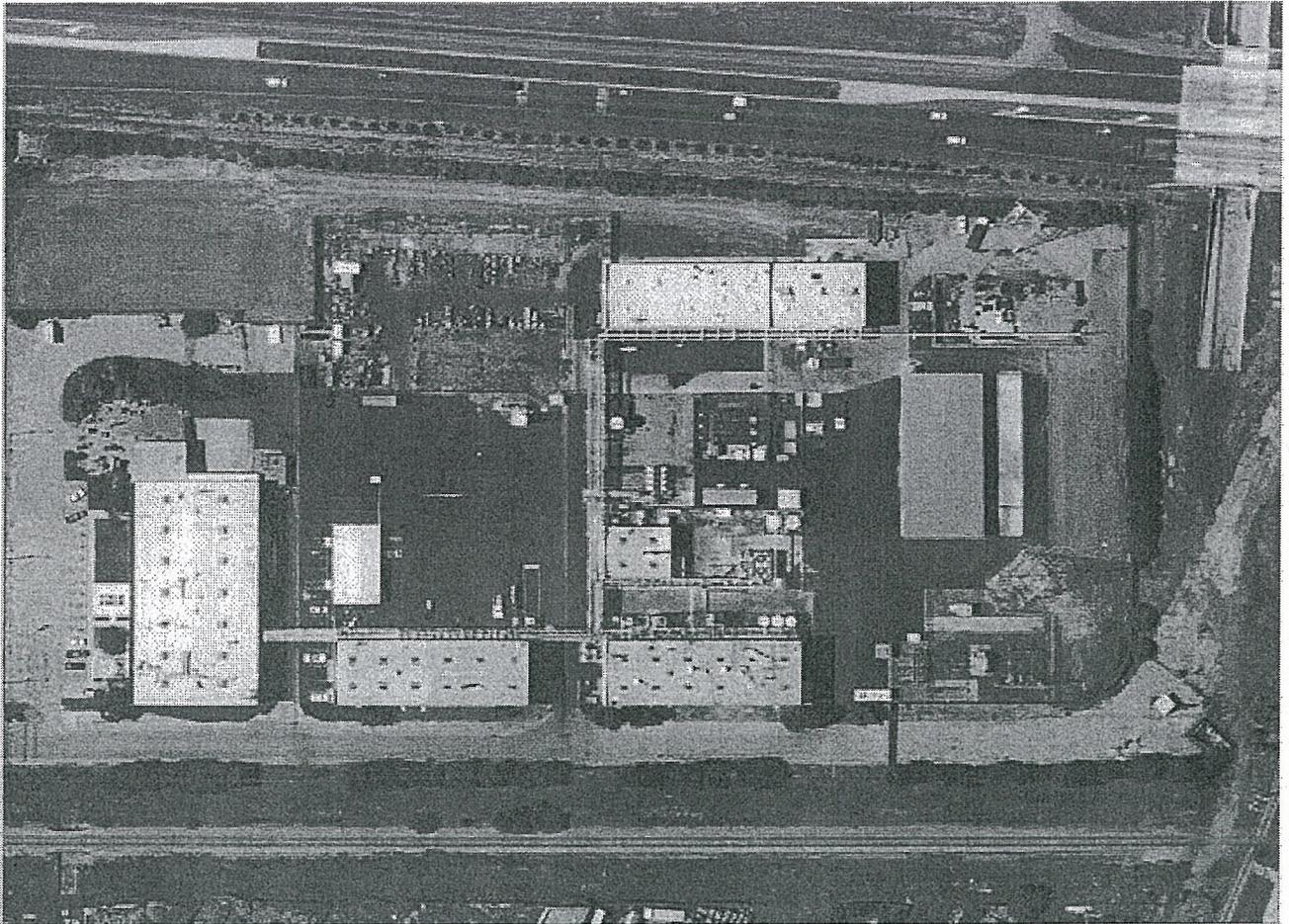
In 2007, Argonaut Holdings (a subsidiary of General Motors Corporation [GM]) purchased the Site with the intent of redeveloping the Site with a new auto center.



Photograph taken August 1957. Source: GRA Associates, Inc.



Photograph taken May 4, 1988. Source: Air Flight Service, Santa Clara, CA



Photograph taken May 23, 1990. Source: Air Flight Service, Santa Clara, CA

4.2.2 RCRA Facility Assessment

From 1983 to 1988, pursuant to a Resource Conservation and Recovery Act (RCRA) permit issued by the California Department of Health Services (DHS), Raychem was allowed to store and treat hazardous wastes resulting from on-Property manufacturing operations. DHS was the DTSC's predecessor agency. According to EEC (2005), Raychem had the capacity to store over 700 drums of hazardous and laboratory chemical waste and eight 595-gallon 'tanks' containing wastewater and potassium ferrocyanide. Raychem also treated spent xylenes in an 800-gallon distillation unit. In 1989, Raychem removed the three permitted hazardous waste management units from service and removed and disposed of the tanks and ancillary equipment. Raychem completed the aboveground work to close the three units in 1991 except for the removal of the Building P tank farm containment pad. This pad was removed in 1996. Closure activities were approved by the DTSC in January 1997.

In September 1989, the DHS completed a RCRA Facility Assessment (RFA) at the facility. During a RFA, an overseeing agency typically compiles existing information on environmental conditions at a given facility and as necessary, gathers additional facility specific information on Solid Waste Management Units (SWMUs), releases, potential releases, release pathways and receptors. Information gathered during the RFA usually forms the basis for initiating a full-scale investigation (RCRA Facility Investigation [RFI]). The Property was divided into a western

portion (Areas 1 to 5) and an eastern portion (Area 6) to facilitate reporting. The RFA identified 15 SWMUs; in 1999/2000 three more SWMUs were added.

Raychem entered into a Corrective Action Consent Agreement (Consent Agreement) with the DTSC in June 1996 to facilitate the required RFI. Tyco entered into another Consent Agreement with the DTSC in September 2000 and further amended it on December 31, 2001. As outlined in the Consent Agreement, Raychem/Tyco was required to perform the following:

- Interim Measures (IM)
- RCRA Facility Investigation (RFI)
- Corrective Measure Study (CMS)
- Remedy Selection
- Corrective Measures Implementation

In addition to the Consent Agreement requirements, sites impacted with PCBs, such as the Property, are regulated by various sections of the United States Environmental Protection Agency (USEPA) Toxic Substances Control Act (TSCA). Activities also were conducted to comply with the intent of San Mateo County facility closure guidelines, the California Health and Safety Code, and the Uniform Fire Code.

The lead environmental regulatory agency for the Property is the DTSC.

4.2.3 RCRA Facility Investigations

From 1981 to 1998, over twenty environmental assessments and investigations were performed at the Property by various consultants. From 1999 through 2003, Tyco conducted several Property-wide investigations (RFI activities) to gather data regarding potential subsurface chemical impacts and subsurface stratigraphy. This work was conducted according to the RFI Work Plan approved in 1999. The RFI was submitted to the DTSC, the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), and the San Mateo County Department of Health Services (County Health) in March 2002 and was titled, "RFI Report – Soil Investigation (Final), Raychem/Tyco Facility – Expanded Area 6 (Eastern Portion of Site)." Site information presented in this document was based on 268 direct-push borings, 58 environmental borings, 75 shallow soil samples, 32 ground water monitoring wells, and approximately 300 chemical tests of soil and ground water samples.

The RFI identified localized areas of contaminated soil and concluded that most of the releases likely occurred in the 1970s and 1980s. Elevated concentrations of contaminants of potential concern (COPC) including polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs) and semi-VOCs were encountered at a number of locations at the Property with the main area of contamination located on-Site at the former ChemPlant. The probable sources of contamination are attributed to leaks and spills from above-ground storage tanks and piping, below-ground sumps, releases from drum storage areas and past waste management practices.

Three additional RFIs were issued and consisted of the following:

- RFI Report – Soil Investigation for the Raychem/Tyco Facility, Areas 1 through 5 (GRA, April June 2002).
- RFI Ground water Report, Raychem/Tyco Electronics (GRA, November 2002).
- Report – Assessment of Off-Site Soils, Sediments, and Surface Water (GRA, September 2003).

The September 2003 document referenced above provided off-Property environmental information (including chemical data for soils, sediment and surface water) for properties located adjacent to and downstream/down-gradient of the Raychem/Tyco Facility.

4.2.4 Chemicals of Potential Concern (COPC)

The RFI identified COPC in soil and ground water samples collected from the Property during these investigations. The identified COPC are presented in Table 5 and briefly discussed below.

Table 5. Chemicals of Potential Concern

Media	VOCs	Semi-VOCs	Metals	Others Chemicals
Soil	Acetone	Benzo (a) anthracene	Aluminum	TRPH
	Benzene	Benzo (b) fluoranthene	Antimony	PCBs
	Chlorobenze	Benzo (k) fluoranthene	Boron	Dioxins
	Chloroethane	Benzo (a) pyrene	Lead	Dibenzofurans
	Chloroform	Bis-2-ethylhexylphthalate	Titanium	Cyanide
	4-Chlorotoluene	Chrysene	Zinc	
	1,4-Dichlorobenzene	Fluoranthene		
	1,1-Dichloroethane	Diethyl phthalate		
	1,2-Dichloroethane	Indeno (1,2,3-cd) pyrene		
	1,1-Dichloroethene	Naphthalene		
	cis-1,2 Dichloroethane (cDCA)	Phenol		
	trans-1,2 Dichloroethene (tDCE)			
	Ethylbenzene			
	Freon 113			
	Methylene Chloride			
	Tetrachloroethene (PCE)			
	Toluene			
	1,1,1-Trichloroethane (1,1,1-TCA)			
	Trichloroethene (TCE)			
	Vinyl Chloride			
Total Xylenes				
Ground Water	Benzene			
	Chlorobenzene			
	Chloroethane			
	1,4-Dichlorobenzene			
	1,1-Dichloroethane			
	1,1-Dichloroethene			
	cDCE			
	Freon 113			
	Methylene Chloride			
	PCE			
	1,1,1-TCA			
	TCE			
Vinyl Chloride				

Consistent with USEPA risk assessment guidance, chemicals considered to be carcinogens and chemicals detected in Site soils in greater than 5% of the total samples analyzed were identified as COPC. The COPC evaluated in the human health risk assessment (2005) included polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs, including chlorobenzene, benzene, 1,4-dichlorobenzene, tetrachloroethylene [PCE] and vinyl chloride), semi-VOCs (including polycyclic aromatic hydrocarbons [PAHs], such as benzo(a)pyrene), dioxins (2,3,7,8-tetrachlorodibenzo-p-dioxin toxic equivalents [TEQ]), and inorganic constituents above typical background concentrations (such as antimony, boron, lead, titanium, zinc and cyanide). Although aluminum reportedly was present at the Site at concentrations consistent with background levels in California, DTSC reportedly requested that aluminum also be included as a COPC for the purposes of the human health risk assessment. Presented below is a brief summary of selected COPC.

4.2.4.1 Polychlorinated biphenyls (PCBs)

PCBs are a class of chlorinated aromatic hydrocarbon chemicals that were used as electrical insulating and heat-exchange fluids. Peak production in the United States occurred in the early 1970s and production was banned in the United States after 1979. These fluids typically have the following characteristics: a heavy oily appearance, high boiling point, high chemical stability, high flash point, low electrical conductivity, and low water solubility. PCBs are not very mobile.

4.2.4.2 Chlorobenzene

Chlorobenzene is a colorless, volatile, liquid with an almond-like odor. It has low solubility in water and is miscible with most organic solvents. It was used primarily as a solvent in polymer monomer development operations in Building O and was recovered after use in a distillation column at the northeast end of Building O on an outdoor concrete pad. There was also a storage tank for chlorobenzene in the area.

4.2.4.3 Total Recoverable Petroleum Hydrocarbons

Total Recoverable Petroleum Hydrocarbons (TRPH) is a term describing a large family of several hundred chemical compounds that originate from crude oil. Some form of petroleum hydrocarbon was used during the production of most, if not all, of the chemicals produced by Raychem.

4.2.4.4 Other Volatile Organic Compounds (VOCs) and Semi-VOCs

VOCs used at the Site include benzene, 1,1-dichloroethene (1,1-DCE) and PCE. Benzene is a volatile, clear, colorless, slightly soluble, highly flammable, aromatic liquid. It was used as a solvent in the production of polymer additives at Raychem. PCE is a nonflammable, volatile, colorless liquid solvent with an irritating ether-like-odor. It was used as a carrier solvent for the production of temperature sensitive polymer marking compounds in a process located at the Raychem ChemPlant and earlier at the Pilot Plant. 1,1-DCE is a volatile, colorless liquid solvent with a mild, sweet smell. It can be used in the production of certain plastics, flame retardant coatings and adhesives. It is also a breakdown component of PCE.

Benzo(a)pyrene is a pale yellow, semi-VOC, crystalline powder with a faint aromatic odor. It is slightly water soluble, freely soluble in aromatic hydrocarbon solvents, and readily binds to soil.

Benzo(a)pyrene is not manufactured and has no industrial uses. It is formed during the combustion of organic matter.

4.2.5 EEC (2006) Soil and Ground Water Investigation

EEC (2006) performed a soil and ground water quality investigation at the Site's eastern parcel. Twenty borings (SB-1 to SB-20) were advanced. One soil sample was collected from each boring. Based on the laboratory analytical data, chromium (418 mg/Kg) and nickel (2,350 mg/Kg) concentrations appeared elevated in 1 of 4 samples (SB-4) analyzed for metals. Cornerstone compared the data to the California Human Health Screening Levels (CHHSLs) (Cal/EPA, September 2010). The CHHSLs are used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas or indoor air at concentrations below the corresponding CHHSLs can be assumed not to pose a significant health risk. In addition, naturally occurring background concentrations of metals, such as arsenic - amongst others, in soil may exceed their respective CHHSLs. Cal/EPA generally does not require cleanup of soil to below background concentrations. Thus, Cornerstone also compared the metal concentrations to regional background levels (Scott, 1991).

The CHHSLs for total nickel in soil on residential and commercial properties are 1,600 and 16,000 mg/Kg, respectively. The nickel concentration detected in SB-4 exceeded the residential CHHSL but not the commercial CHHSLs. Nickel did exceed the Total Threshold Limit Concentration (TTL, California's hazardous waste limit), which for nickel is 2,000 mg/Kg. Scott (1991) reported natural background nickel concentrations in the southern Bay area from 6 to 145 mg/Kg. Published analyses of nickel contents in bedrock units in the southern Bay area include several for serpentinite, partially serpentinitized ultramafic igneous rock and associated rocks; these rocks have relatively high concentrations of nickel. Bailey and Everhart (1964) reported that serpentinite and associated altered and mineralized silica-carbonate rock in the New Almaden district contained 800 to 2,000 mg/Kg of nickel.

There is no CHHSL for total chromium (only for chromium III and chromium VI). U.S. EPA also has developed screening levels, called Regional Screening Levels (RSLs, 2009). Total chromium exceeded the residential RSL (280 mg/Kg) but not the commercial RSL (1,400 mg/Kg). Scott (1991) reported natural background total chromium concentrations in the southern Bay area up to 170 mg/Kg.

The source of these metal concentrations in soil is unclear; the elevated concentrations detected in one sample may be indicative of natural variations of background concentrations or associated with isolated releases from prior facility operations.

Chlorobenzene, a contaminant of concern, was detected in two ground water samples (0.081 mg/L and 0.68 mg/L).

Selenium (0.119 mg/L) was detected in one ground water sample; its Maximum Contaminant Level (MCL, commonly termed drinking water standard) is 0.05 mg/L. The report did not note whether the water sample was filtered prior to analysis and may not accurately reflect the concentration of selenium dissolved in ground water.

4.2.6 Interim Remedial Measures

Interim Remedial Measures (IRMs) are actions that can be initiated prior to implementation of the final corrective measure to attempt to control or to eliminate the release or potential release of hazardous wastes or hazardous materials at or from a facility. Voluntary soil removal/disposal activities were conducted by Tyco from May 2000 through March 2007 (Figure 4). The IRMs were divided into Phase 1, Phase 2, and Addendum Nos. 1 through 5. Work plans with removal action goals were submitted to and approved by DTSC. After each IRM, a completion report was submitted to DTSC summarizing the work performed.

Phase 1 consisted of the decommissioning and demolition of Buildings P and Y and several above ground storage tanks (e.g., xylene and toluene) and waste storage tanks formerly located in Area 6. Phase 1 activities were completed between April and August 2000.

Phase 2 consisted of the removal of approximately 2,780 cubic yards (cy) of chemically-impacted soil from four SWMUs in Area 6 and capping the former building areas and SWMUs with imported fill. These SWMUs are:

- SWMU No. 6a Chlorobenzene-impacted soil in the vicinity of the Hazardous Waste Storage Yard
- SWMU No. 16 PCB-impacted soil in the vicinity of the former Dowtherm Boiler/Therminol Heater
- SWMU No. 17 Chlorobenzene-impacted soil northeast of Building O
- SWMU No. 18 VOC-impacted soil beneath former Building P

Phase 2 IRM activities, including impacted soil excavation, soil disposal, soil import, backfilling and Site grading operations, were completed between August 2000 and January 2001. Subsequent IRM activities were performed as addendums to the original IRM Work Plan.

Addendum Nos. 1 and 2 applied to the backfill and capping of SWMU No. 16, respectively. The IRM for SWMU No. 16 consisted of the removal of approximately 1,600 cy of PCB-impacted soil in the vicinity of the former Dowthermal Boiler/Therminol Heater. Soil removal extended to a depth of approximately 9 feet, which reportedly represented the bottom of the upper Bay Mud. Excavation below this depth was deemed impractical. It was estimated that 80 to 90% of the PCBs in soil at SMWU No. 16 were removed by the IRM; approximately 300 kilograms (kg) of PCBs have been estimated by others to remain in the soil, most at a depth of greater than approximately 9 feet but probably not deeper than approximately 20 feet.

An engineered cap was placed over this area at a depth of approximately 4 ½ feet and consists of four discrete layers listed below in ascending order:

- Geosynthetic Granulated clay liner (GCL) component;
- High-density polyethylene liner component (40 mil thick);
- Geonet protective drainage cover; and
- Protective layers (approximately 4½ feet thick) of compacted, select soil material

The two greatest concentrations of PCBs remaining in soil are located beneath the engineered cap (2,100 mg/Kg at a depth of approximately 16 feet and 2,600 mg/Kg at a depth of approximately 12 feet).

During April to June 2005, an additional approximately 1 to 1½ feet of DTSC approved imported fill was placed over most of Area 6 to raise the ground surface elevation for flood protection for future Site development. As a result of this activity, the engineered cap is approximately 6 feet thick.

Addendum No. 3 (November to December 2000) addressed the removal activities of approximately 1,000 cy of soil at SWMU No. 18 (Building P). VOCs and semi-VOCs, such as benzene, benzo(a)pyrene, 1,1-DCE and PCE were reported.

Addendum No. 4 (November to December 2001) included the removal of soil at various chemically-impacted areas and storm drain inlets, demolition of Building O, and removal of a remaining power pole stub in Area 6. Approximately 835 cy of soil were removed from Area 6 for activities associated with Addendum No. 4.

Addendum No. 5 (October to February 2003) included the removal of impacted soil from the western portion of the Property (off-Site).

Concurrent with the removal of soil at the off-Site storm water swale area in the railroad right-of-way (located south of the Site's east end), soil removal activities were performed at three additional areas at the Site where PCB-impacted soil was reported (November 2004). These areas included three locations in Area 6 and one location adjacent to the off-Site storm water swale in Area 6.

TRPH impacted soil above the action level of 1,000 mg/Kg was encountered as a result of soil sampling after demolition of Buildings N and U, the associated office trailer, Pipe Rack Area, Landscape Maintenance Yard and the former Electrical Substation (February to March 2007). Approximately 246 cy of TRPH-impacted soil were removed.

Table 5 below summarizes the IRMs performed at the Site to date. The approximate limits of the excavations for the IRMs are presented on Figure 4. The approximate limits of PCBs remaining in soil above 1 mg/Kg are presented on Figure 5.

Table 6. Summary of IRM Activities

IRM No.	Area	Date	Approximate Excavation Area	Approx. Quantity of Soil Excavated	Greatest Concentration of COC Prior to IRM	Greatest Concentration of COC Reported After IRM
Phase 2	Northeast of Building O (SWMU No. 17)	Aug. to Sept. 2000	Depth: 6 ft Laterally: 30 ft	30 cy	Chlorobenzene (630 mg/Kg @ 4 ft)	Chlorobenzene (100 mg/Kg at 4 ½ ft)
Phase 2	Hazardous Waste Storage Yard, Three Areas (SWMU No. 6a)	Aug. to Dec. 2000	Depth: 9 ft Laterally: 90 ft	1,150 cy	Chlorobenzene (808 mg/Kg @ 3 ½ ft)	Chlorobenzene (17 mg/Kg @ 4 ft)
Phase 2	Dowtherm Boiler/Therminol Heater (SWMU No. 16)	Aug. to Oct. 2000	Depth: 9 ft Laterally: 100 ft	1,600 cy	PCBs (20,000 mg/Kg @ 6 ft)	PCBs (2,100 mg/Kg @ 16 ft) (2,600 mg/Kg @ 12 ft) Present in saturated soil beneath engineered cap.
Addendum No.3	Building P (SWMU No. 18)	Nov. to Dec. 2000	Depth: 8 ft Laterally: 105 ft	1,000 cy	Benzene (7.4 mg/Kg @ 5.3 ft)	Benzene (3.9 mg/Kg @ 4 ½ ft) Active 4-inch gas line restricted further excavation
Addendum No. 4	Hazardous Waste Transfer Depot	Nov. 2001	Depth: 8 ft Laterally: 75 ft	400 cy	TRPH (1,010 mg/Kg @ 6 ft) PCBs (2.8 mg/Kg @ 1 ½ ft)	TRPH (576 mg/Kg @ 4 ft) PCBs (2.2 mg/Kg @ 4 ft)
Addendum No. 4	Forklift Cleaning Station	Nov. 2001	Depth: 8 ft Laterally: 20 ft	100 cy	PCBs (20 mg/Kg @ 0 ft)	PCBs (1.3 mg/Kg @ 4 ft)
Addendum No. 4	Building O (Three areas beneath and east of building)	Nov. 2001	Depth: 4 ½ ft Laterally: 18 ft	100 cy	PCBs (207 mg/Kg @ 3 ½ ft) Chlorobenzene (480 mg/Kg @ 6.3 ft)	PCBs (1.3 mg/Kg @ 3 ft) Chlorobenzene (2.8 mg/Kg @ ft)
Addendum No. 4	West of Building Y	Nov. 2001	Depth: 8 ft Laterally: 18 ft	150 cy	TRPH (2,670 mg/Kg @ 1.7 ft)	TRPH (758 mg/Kg @ 4 ft)
Addendum No. 4	Electrical Substation Vicinity (two areas)	Nov. 2001	Depth: 4 ft Laterally: 18 ft	70 cy	TRPH (1,540 mg/Kg @ 1.2 ft) Benzo(a)pyrene (0.54 mg/Kg @ 5 ft)	TRPH (133 mg/Kg @ 2 ½ ft) Benzo(a)pyrene (<0.41 mg/Kg @ 4 ft)
Addendum No. 4	Southwest of Office Trailer	Dec. 2001	Depth: 4 ft Laterally: 9 ft	15 cy	TRPH (2,770 mg/Kg @ 1 ½ ft) PCBs (3.8 mg/Kg @ 1 ½ ft)	TRPH (205 mg/Kg @ 4 ft) PCBs (1.5 mg/Kg @ 4 ft)

Table 6 continued. Summary of IRM Activities

IRM No.	Area	Date	Approximate Excavation Area	Approx. Quantity of Soil Excavated	Greatest Concentration of COC Prior to IRM	Greatest Concentration of COC Reported After IRM
Addendum No. 4	Storm Drain Inlets	Oct. 2001	Sediments Removed	< 1 cy	TRPH (1,600 mg/Kg @ 0 ft) PCBs (120 mg/Kg @ 0 ft)	Sediments Removed
In Conjunction with Storm Swale Soil Removal	DP 351-0.5 DP 336-0.6 DP 318-2.1 Area 6	Oct. to Nov. 2004	Depth: 3 ft Laterally: 20 ft	25 cy	PCBs (40 mg/Kg @ ½ ft)	PCBs (8.4 mg/Kg @ 1 ft)
In Conjunction with Storm Swale Soil Removal	Near Middle Storm Water Outfall Area 6	Nov. 2004	Depth: 1 ½ ft Laterally: 16 ft	10 cy	PCBs (180 mg/Kg @ 1 ft)	PCBs (0.15 mg/Kg @ 1 ft)
Work Plan January 2007	Northwest Corner of Building N	Feb. to March 2007	Depth: 7 ½ ft Size: 640 ft ²	161 cy	TRPH (6,000 mg/Kg @ 5 ft)	TRPH (790 mg/Kg @ 4 ½ ft)
Work Plan January 2007	Eastern Area of Building N	Feb. to March 2007	Depth: 7 ft Size: 525 ft ²	135 cy	TRPH (13,000 mg/Kg @ 1 ft)	TRPH (200 mg/Kg @ 4 ft)
Work Plan January 2007	Beneath Landscape Maintenance Yard	Feb. to March 2007	Depth: 2 ½ ft Size: 525 ft ²	50 cy	TPHmo (6,000 mg/Kg @ 0.3 ft)	TRPH (180 mg/Kg @ 2 ½ ft)

Notes:

Phase I of the IRM (April to August 2000) consisted of the decommissioning of Buildings P and Y and several above ground xylene and waste storage tanks formerly located in Area 6.

4.2.6.1 Off-Site Areas

Based on previous sampling data of off-Site areas (SCS 2003 and SCS 2004), concentrations of total PCBs ranged from not detected to a maximum of 20 mg/Kg in the storm swales located off-Site in the San Mateo County Transit District railroad right-of-way, between the railroad tracks and the Tyco facility fence line. In October to November 2004, soil removal and disposal activities in the off-Site storm water swale were conducted to remediate areas impacted with elevated concentrations of total PCBs (SCS 2004). This area was approximately 700 feet long, 30 feet wide and approximately 2 feet deep. The storm water swale collected surface drainage from a portion of Menlo Park and from several small concrete lined V-ditches inside the Site (former ChemPlant) that run in a north-south direction, perpendicular to the swale.

Approximately 123 cy of PCB-impacted soil from three separate zones in the storm water swale were excavated to depths of approximately 1 to 2 feet. Confirmation sampling indicated that cleanup goals (total PCBs at 1 ppm) were achieved. Post excavation sampling reported total PCBs ranging from 0.09 to 0.8 ppm with a mean concentration of 0.381 ppm. All excavated areas were reportedly backfilled with 'clean' quarried material. DTSC approved the remedial activities in their letter dated April 26, 2005.

4.2.7 Ground Water

Ground water RFIs were conducted between 1999 and 2004. Constituents of concern noted by GRA in ground water generally include chlorobenzene, 1,1-DCE and PCBs. The investigations indicate that ground water contamination appears generally limited to the Property. In addition, natural attenuation of ground water contaminants has been reported by others as occurring; contaminant concentrations are anticipated by others to continue to decrease in ground water with time. IRMs conducted on-Site and natural attenuation processes have reduced the ground water contaminant plume in size and concentrations of VOCs. The ground water flow direction in the western portion of the Property is eastward, thus, contaminated ground water from the western portion of the Property is flowing toward and impacting the Site. Concentrations of total VOCs in ground water have been reported beneath Building I at approximately 100 µg/L. Locations of ground water monitoring wells and analytical data for selected COC are presented on Figures 6 through 11.

Ground water modeling conducted by HydroFocus (2003) evaluated selected COC concentrations to the year 2072. The estimated flow rate for chlorobenzene was estimated at approximately 24 feet per year for the Site; the ground water flow velocity for PCBs was estimated at 1 foot per year. The result of the ground water flow and contaminant transport modeling predicted declining concentrations of VOCs (chlorobenzene and 1,1-DCE) over time with minimal movement of PCBs in ground water.

4.2.8 Soil Action Levels for COC

Soil action levels are referenced in Section 6.1 of the "Operation, Maintenance and Monitoring Plan (OMMP) contained in Appendix G of the "Corrective Measures Study and Implementation Plan (CMS), dated November 2006. The action levels for the chemicals and metals (as listed pursuant to Section 6.3 of the OMMP) are the U.S. EPA Industrial Preliminary Remediation Goals (PRGs) for each substance. In 2009, EPA Region 9 replaced the PRGs with Regional Screening Levels (RSLs). In addition, there are substances for which Site-specific action levels have been established and used as the basis of the RCRA Remedial Actions at the Site; those substances are set forth in Table 6 below and also are compared to residential (unrestricted use) and commercial California Human Health Screening Levels (CHHSLs, CalEPA 2010).

Table 7. Site Specific Action Levels

COC	Action Level	Residential RSL ¹	Commercial RSL ¹	Residential CHHSL ²	Commercial CHHSL ²
Total PCBs	10 mg/Kg	0.14 to 3.9	0.54 to 21	0.089 mg/Kg	0.30 mg/Kg
TRPH	1,000 mg/Kg	NE	NE	83 to 370 mg/Kg ³	83 to 2,500 mg/Kg ³
Arsenic	31 mg/Kg (95% UCL) ⁴	0.39 mg/Kg	1.6 mg/Kg	0.07 mg/Kg	0.24 mg/Kg
Chromium	2,400 mg/Kg (95% UCL)	280 mg/Kg	1,400 mg/Kg	100,000 mg/Kg ⁵	100,000 mg/Kg ⁵

Notes:

mg/Kg Milligrams per kilogram (ppm, part per million)

NE Not Established

1 "Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites", USEPA, May 2010. RSLs for PCBs are dependent upon type; thus, a range is listed.

2 "Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties, CalEPA, September 2010.

3 Taken from "Screening For Environmental Concerns at Sites with Contaminated Soil and Groundwater", Table A, San Francisco Bay Regional Water Quality Control Board, May 2008

4 Typical arsenic concentrations range from 0.2 to 5.5 mg/Kg with maximum detections up to 20 mg/Kg as noted in "Background Metal Concentrations in Soil in Northern Santa Clara County, California", Christina M. Scott, December 1991

5 Listed CHHSL is for Chromium III

The OMMP requires that during underground construction activities, all soil surfaces should be kept moist by watering, and no visible dust should be generated. The following table presents the monitoring and action levels required by DTSC.

Table 8. Action Levels for Air Monitoring, Construction Worker

Parameter	Methodology	Action Level
Particulates (Real Time)	Dust monitoring every ½ hour within the Exclusion Zone	Level C – half face respirator for the first day or until the dust exposure (as measured by real-time instruments) is confirmed to be below 0.5 mg/m ³ . For any time thereafter: <0.5 g/m ³ (Level D) 0.5 to 2 mg/m ³ (Level C – full face) >5 mg/m ³ (Level B or suspend activities)
VOCs	PID monitoring every ½ hour within the Exclusion Zone	< 5 ppm (Level D) 5 to 10 mg/Kg (Level C – half face) 10 to 100 mg/Kg (Level C – full face) >100 mg/Kg (Level B or suspend activities)

Lastly, the OMMP requires, to the extent possible, that all excavated soils be returned back into the excavation area from which they were removed. Any excess soil is required to be stored in roll-off waste bins and characterized prior to disposal at an appropriate facility. Based on the documents reviewed, DTSC will not allow stockpiling of soil at the Site. The excavated soil must be stored inside waste bins and materials to be removed from the Site are required to be analyzed by a State certified laboratory for a select suite of chemical parameters.

4.2.9 Human Health Risk Assessment

Based on the findings of the RFIs and the results of the IRMs, a human health risk assessment (HHRA) was conducted in general accordance with a DTSC approved work plan. The objective of the HHRA was to evaluate the potential human health risks attributable to residual chemicals of potential concern present in the soil and ground water at the Site.

The HHRA, which was reviewed and approved by the DTSC, is presented in the report titled:

- Baseline Human Health Risk Assessment, Eastern Portion (Expanded Area 6), Tyco Electronics (Former Raychem) Facility, Menlo Park, California, dated July 2005 (SCS)

The HHRA assumed the presence of residual contaminants, primarily PCBs, and evaluated the risk estimates for the following potentially exposed populations: a) on-Site commercial/industrial worker; b) on-Site construction/utility worker; c) off-Site commercial/industrial worker; d) off-Site resident; and e) hypothetical future on-Site resident.

The three exposure scenarios included: a) unchanged configuration (as of 2005); b) future modified Site configuration with all existing surface cover (including pavements and buildings) removed and the underlying soil exposed; and 3) hypothetical future modified Site configuration (unrestricted land use).

To place the risk estimates in perspective, the EPA National Contingency Plan (40 CFR 300.430) states, “For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an upper bound lifetime cancer risk to an individual of between 10⁻⁴ to 10⁻⁶.” In California, 10⁻⁶ represents the lower end of the acceptable range of

risk recommended by U.S. EPA (10^{-4} to 10^{-6}). Remediation is generally not warranted at sites where the estimated cancer risk does not exceed 10^{-6} . Remediation is generally warranted at sites where the estimated cancer risk exceeds 10^{-4} . For sites where the risk lies between 10^{-4} and 10^{-6} , the need for active remediation is evaluated on a site-specific basis. In addition, the Office of Environmental Health Hazard Assessment (OEHHA) has developed Proposition 65 safe harbor levels – no significant risk levels (NSRLs) for carcinogens and maximum allowable dose levels for chemicals that cause reproductive toxicity. The NSRL is the daily intake level calculated to result in one excess case of cancer in an exposed population of 100,000 (10^{-5}), assuming lifetime (70-year) exposure at the level in question.

Assuming the Site remains commercial/industrial and the engineered cap remains in place, the estimated risks from potential direct exposure to soil and ground water at the Site ranged from approximately 10^{-9} to 10^{-5} . If the Site is redeveloped, the placement of 'clean' fill, building pads, foundations, hardscapes, landscapes and roadways will further reduce the exposure and potential risk. The HHRA noted that the Site would not pose a significant threat to human health if continued to be used as a commercial/industrial property. However, the HHRA did note that if the Site were to be developed for residential use, further action would be required to protect human health. A Land Use Covenant (LUC) was recommended to limit future Site use to commercial/industrial.

4.2.10 Land Use Covenant

Because hazardous wastes remain in the soil and ground water at the Site, DTSC determined that a Covenant and Agreement to restrict Site uses was necessary for the protection of human health and the environment. A Land Use Covenant (LUC) restricting the use of the Property was made between Tyco Electronics and the DTSC (January 2007) and is binding upon all owners of the land, their heirs, successors and assignees. The LUC must be incorporated by reference in each and all deeds and leases for any portion of the Property. DTSC determined that the LUC was necessary to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials. DTSC has determined that the Property has been remediated to a level that is acceptable for commercial and industrial use but not for residential use.

The following uses of the Property are prohibited:

- 1) Residential
- 2) Hospitals
- 3) Public or private schools for persons under 21 years of age
- 4) Day care for children

Other prohibited activities include:

- 1) Raising agricultural products
- 2) Drinking water
- 3) Extraction of ground water
- 4) Any activity that may disturb the engineered capped; paving is permitted
- 5) Any activity that may interfere with the operation and maintenance of the ground water monitoring wells

In addition, activities that will disturb soil, such as excavation, grading, removal, trenching, filling, earth movement or mining shall only be permitted on the Property pursuant to a Soil Management Plan and a Health and Safety Plan as approved by DTSC.

4.2.11 Easement Agreement

In accordance with a Purchase and Sales Agreement (November 2006), an easement agreement was made by and between Tyco and Argonaut Holdings, Inc. on March 15, 2007. The purpose of this Agreement was to create certain easements and related rights for Tyco to facilitate ongoing environmental monitoring and mitigation activities at the Site, such as maintenance of ground water monitoring wells and continued ground water monitoring. Tyco also maintained the responsibility to decommission the monitoring wells within 90 days upon which Tyco's obligation to monitor the wells ceases. This Agreement was modified in December 2007 to facilitate the completion of Site remediation activities.

4.2.12 DTSC's Approval of Site Mitigation Measures

The DTSC approved the remedies for the on-Site soil and ground water contamination in the Negative Declaration dated November 30, 2006. DTSC approved the following remedies:

- Install five new ground water monitoring wells and abandon one monitoring well.
- Enter a Land Use Covenant (LUC) for the Property with special restrictions for the approximately 11,437 square foot engineered cap area and annual inspection of the Property to verify that the land use remains unchanged.
- Conduct periodic ground water monitoring. The newly installed wells will be sampled and analyzed for PCBs and VOCs annually for the first 5 years. Then, ground water will be sampled and analyzed for PCBs and VOCs at a frequency of every 5 years for 20 years from a network of 45 wells. Out of the 45 wells, 16 wells will be monitored for PCBs for an additional 30 years.

DTSC prepared an Initial Study pursuant to the requirements of the California Environmental Quality Act (CEQA) and implementing guidelines. Based upon the analysis, DTSC determined that the project will not have a significant effect upon the environment. DTSC determined that the project does not require any additional mitigation measures beyond those incorporated as part of the project.

4.3 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

The following additional sources of readily ascertainable public information for the Site also were reviewed during this Phase I ESA.

4.3.1 City and County Agency File Review

Cornerstone requested available files pertaining to 312-314 Constitution Drive at the following public agencies; the Menlo Park Building Department (MPBD) and the San Mateo County Environmental Health Department (County Health). A summary of the information made available to us is presented below.

County Health Files: The County Health files contained copies of many of the documents listed in Table 4 (i.e., those available in the Envirostor database) along with Hazardous Materials Business Plans (HMBPs), chemical inventories, inspection reports, miscellaneous correspondence and permits related to past chemical use, storage and handling at the Raychem/Tyco facility. Most documents were dated between 1985 and 2010. Many of the inspection reports noted violations pertaining to the improper storage and handling of hazardous materials by Raychem/Tyco. Thousands of pages of documents were present, many of which pertained to off-Site areas of the Raychem property. Some of the SMCEHD files were available in an electronic format; those documents are presented in Appendix A.

In general, the files were poorly organized, making it difficult to distinguish which documents pertained to on-Site facilities. Due to the large number of documents, a detailed review of each could not be reasonably performed within the scope of this investigation; thus, only a cursory review was conducted. The information reviewed indicates that development of the Raychem facility was initiated in 1968 and Raychem began operations in 1969. Raychem and subsequently Tyco appeared to have been the primary Site occupants; however, other business names also were noted on several documents including Interwave (312 Constitution Drive), Agilera (313 Constitution Drive) and Dow Corning (314 Constitution Drive).

In 1985, two adjacent underground storage tanks (USTs) containing gasoline reportedly were removed from an off-Site location near (off-Site) the southwest corner of the Site. A third UST also was removed that was located south of Building E, approximately 800 feet west of the Site. Two ground water samples were collected and analyzed for TPHg. The locations of the samples were not identified. TPHg was detected in one of the ground water samples at 21 mg/L and was not detected in the other.

MPBD Files: The MPBD files contained building plans, permits and other correspondence related to the initial construction of the Raychem facility and subsequent tenant improvements/alterations. Due to the large number of documents at the MPBD (thousands of pages), a detailed review of each could not be reasonably performed within the scope of this investigation; thus, only a cursory review was conducted. The documents were dated between the 1960s and 2010. Raychem and Tyco appeared to have been the main occupants of the Site. Building plans dated during the mid-1970s indicate that on-Site Buildings P, O and Y were associated with a chemical plant. Office uses of on-Site Buildings I and J were noted. Applicant was noted to have leased building J from Tyco in 2002.

SECTION 5: PHYSICAL SETTING

We reviewed readily available geologic and hydrogeologic information to evaluate the likelihood that chemicals of concern released on a nearby property could pose a significant threat to the Site and/or its intended use.

5.1 RECENT USGS TOPOGRAPHIC MAP

A 1997 USGS 7.5 minute topographic map was reviewed to evaluate the physical setting of the Site. The Site's elevation is shown to be approximately 5 feet above mean sea level. Topography in the vicinity of the Site slopes gently to the north, towards the San Francisco Bay.

5.2 HYDROGEOLOGY

The Site is located near the southwestern portion of the San Francisco Bay. Regional geology is characterized by up to several feet of artificial fill (sandy gravels, clayey gravels and sandy clays) underlain by native materials (older alluvial fan deposits, basin deposits, estuarine and channel deposits) consisting of materials ranging from high plasticity clays to granular deposits of sands or gravels. Depth to bedrock is estimated at approximately 550 feet below the ground surface. The fill source for the eastern and central parts of the Raychem property reportedly was road cut for the I-280 highway, just to the north of Woodside Road (south of Farm Hill Boulevard exit).

The predominance of low permeability clayey estuarine deposits reportedly has restricted the subsurface migration of chemicals released at the Site.

Ground water beneath the Site is typically encountered at shallow depths, generally within 9 to 14 feet of the surface, and it rises (due to semi-confined conditions) to within a few feet (approximately 8 to 10 feet) of the surface. The upper water bearing zone is divided into an upper Alpha unit (up to depths of approximately 25 feet) and lower Alpha unit (approximately 25 to 37 feet). A Beta water bearing zone is present at an approximate depth of 37 to 43 feet and extends to approximately 100 feet. The Beta zone and the next (deeper) water bearing zone are separated by low permeability clays that reportedly are tens of feet thick and laterally extensive.

The Alpha and Beta water bearing zones are characterized by hyper-saline conditions (more saline than sea water) for most of the Site due to its close proximity to commercial saltwater evaporation ponds that border San Francisco Bay.

GRA Associates (GRA, January 2002), prepared a report on the beneficial uses of ground water. The staff at the Water Board reviewed and approved the report with a letter dated August 13, 2002. This letter stated, "staff finds that the quality of shallow groundwater underlying the Tyco site is such that it is not considered as a potential source of drinking water, based on the high Total Dissolved Solids (TDS) in the shallow aquifer zone."

Based on an April 2007 ground water monitoring report, the ground water flow direction at the Site was measured to the east. The easterly direction of the ground water gradient is believed to be a result of deflection of ground water flow due to 1) the heavier, hypersaline wedge of water located north of the Site; 2) the influence of a dewatering trench located in the area of the underpass near the northeast corner of the Site (and possibly the system of storm drain trenches located near Willow Road; and 3) flow through the natural subsurface drainage pathway to Ravenswood Slough.

SECTION 6: HISTORICAL USE INFORMATION

The objective of the review of historical use information is to develop a history of the previous uses of the Site and surrounding area in order to help identify the likelihood of past uses having led to Recognized Environmental Conditions at the property. The ASTM standard requires the identification of all obvious uses of the property from the present back to the property's first developed use, or back to 1940, whichever is earlier, using reasonably ascertainable standard historical sources.

6.1 HISTORICAL SUMMARY OF SITE

The historical sources reviewed are summarized below. The results of our review of these sources are summarized in Table 9.

- **Historical Aerial Photographs:** We reviewed aerial photographs dated 1943, 1956, 1965, 1974, 1982, 1993, 1998 and 2005 obtained from Environmental Data Resources, Inc. (EDR) of Milford, Connecticut; copies of aerial photographs reviewed are presented in Appendix C.
- **Historical Topographic Maps:** We reviewed USGS 15-minute and 7.5-minute historic topographic maps dated 1899, 1902, 1943, 1947, 1948, 1953, 1961, 1968, 1973, 1991 and 1997; copies of historic topographic maps reviewed are presented in Appendix C.
- **Historical Fire Insurance Maps:** EDR reported that the Site was not within the coverage area of fire insurance maps.
- **Local Street Directories:** We reviewed city directories obtained from EDR that were dated from 1977 to 2008 to obtain information pertaining to past Site occupants; the city directory summary is presented in Appendix D. Raychem was listed as an occupant of 300 Constitution Drive on city directories dated between 1977 and 2000.

Table 9. Summary of Historical Source Information for Site

Date	Source	Comment
1899, 1902 and 1943	Topographic maps	The Site is depicted as undeveloped land. The northern portion of the Site is depicted as tidal marshlands associated with San Francisco Bay.
1943	Aerial photograph	The Site is shown as tidal marshlands associated with San Francisco Bay.
1947	Topographic map	The Site is depicted as undeveloped land. The northern portion of the Site is depicted as tidal marshlands associated with San Francisco Bay.
1948	Topographic map	The Site is depicted as undeveloped land.
1953	Topographic map	A small structure is depicted on-Site, along with a circular access road.
1956	Aerial photograph	The Site appears to be occupied by the asphalt batch plant noted in Section 4.2.1.
1961	Topographic map	The Site appears similar to that shown on the 1953 topographic map.

Table 9 (Continued). Summary of Historical Source Information for Site

Date	Source	Comment
1965	Aerial photograph	The Site appears similar to that shown on the 1956 aerial photograph.
1968	Topographic map	What appear to be four small structures are depicted on-Site.
1973	Topographic map	What appear to be Raychem buildings N, O and P are depicted on-Site.
1974 and 1982	Aerial photographs	What appear to be several Raychem buildings and facilities are shown on the eastern (ChemPlant) portion of the Site.
1991	Topographic map	What appear to be several of the Raychem buildings are depicted on-Site, including the two current office buildings.
1993	Aerial photograph	In addition to the ChemPlant facilities on the eastern portion of the Site, the two current office buildings (Buildings I and J) are shown to be present.
1997	Topographic map	The Site appears similar to that shown on the 1991 topographic map.
1998	Aerial photograph	The Site appears similar to that shown on the 1993 aerial photograph.
2005	Aerial photograph	The Site appears similar to that shown on the 1998 aerial photograph, except that several of the ChemPlant facilities appear to have been removed.

6.2 HISTORICAL SUMMARY OF SITE VICINITY

Based on our review of the information described in Section 6.1, the general Site vicinity appears to have been undeveloped during the early 1900s. By the 1940s, a Southern Pacific railroad line was constructed adjacent to the south of the Site, and an increase in development generally to the south of the Site is apparent (within the cities of East Palo Alto and Menlo Park). Commercial structures appear to have been constructed on Raychem property to the west of the Site by 1968, with additional structures added during the 1970s and 1980s.

SECTION 7: SITE RECONNAISSANCE

We performed a Site reconnaissance to evaluate current Site conditions and to attempt to identify Site Recognized Environmental Conditions. The results of the reconnaissance are discussed below. Additional Site observations are summarized in Table 10 in Section 7.2. Photographs of the Site are presented in Section 7.2.3.

7.1 METHODOLOGY AND LIMITING CONDITIONS

To observe current Site conditions (readily observable environmental conditions indicative of a significant release of hazardous materials), Cornerstone staff Ron L. Helm, C.E.G., R.E.A. II, visited the Site on November 15, 2010, and was allowed access by Mr. John Kovaleski of Colliers International (real estate agent for the seller). Cornerstone staff only observed those areas that were reasonably accessible, safe, and did not require movement of equipment, materials or other objects.

7.2 OBSERVATIONS

The Site is comprised of approximately 22 acres of land (two parcels: east and west). Site access is provided through Constitution Drive and Bayfront Expressway. Reportedly, the property is zoned M2 (general industrial) with 0.45 FAR. The Site is currently unoccupied.

7.2.1 Western Parcel

The western parcel is improved with two, approximately 60,000 square foot, 2-story office buildings (referred to as Buildings I and J), a guard shack, landscaped areas, athletic courts, and asphalt-paved parking areas. Please note that not all rooms of the buildings were observed nor were all room unlocked to allow entrance.

Building I reportedly was constructed in approximately 1983. Building J appeared to be of newer construction than Building I and was reported constructed in 1988. The exterior of the buildings consist of concrete and glass panel walls. The main entrances of the buildings are located at the 'corner' of the 'L', where the buildings face each other. A number of employee entrances are located around the perimeter of the buildings. Fencing was observed around the perimeter of the Site. A gated entrance to Bayfront Expressway was provided. The buildings are not in use.

Parking areas are located to the east, west and southeast of the buildings. The parking areas are illuminated by pole mounted lights. The pavement areas generally appear to drain into catch basins located throughout the Site and eventually to a storm sewer system under City and State jurisdictions. The on-Site landscaping is mainly in the islands and perimeter greenbelt areas adjacent to the buildings and parking lots and along the north, east and west sides of the buildings. The landscaping consists of trees, shrubs, flower beds and grass areas. Sidewalks exist along the perimeters of the buildings and along some of the landscaped areas. A gated boundary fence erected between the Tyco buildings and Buildings I and J blocks any vehicle access to the west parking area. All buildings and their parking areas to the east of Buildings I and J have been demolished. The area north of the buildings contains athletic courts, as well as a 'fitness/exercise trail.'

Based on our observations, Building J appeared newer in construction and décor than Building I. Corridors were present through all office areas. These corridors consisted of carpeted or tiled floors, drywall, wood veneer paneling, or glass panel walls and drywall ceilings. There were several kitchenettes locate throughout each building, some of which contained garbage grinders and dishwashers.

Three staircases were located in each of the 2-story buildings. One elevator is located near the main entrance lobby of each building. The elevator equipment rooms were inaccessible during our Site visit. Additionally, a wheelchair lift was observed in the stage area of the Auditorium of Building J.

There were several rooms that were labeled as 'shop' or 'computer laboratory' areas; they typically had concrete block or drywalled walls, suspended 2 foot by 2 foot or 2 foot by 4 foot ceiling tiles and carpeted floors. Office areas typically had painted drywall, glass panel or wood veneer walls, suspended ceiling tiles and carpeted or tiled floors.

The two buildings are served by rooftop and penthouse equipment room mounted heating and cooling units. The air appears to travel from the rooftop units to VAV boxes, through the ducts, and to a number of ceiling mounted diffusers.

Electrical service appears to enter the buildings from two ground-mounted, privately-owned transformers located in a walled mechanical compound in the south parking lot. There were several smaller electrical 'closets' throughout the buildings. Several floor-mounted step-down transformers were observed in mechanical areas throughout the buildings. According to EEC (2005), no transformers with PCB content in fluids above regulatory limits remain at the facility. The office lighting is mostly comprised of recessed 2 foot by 4 foot fluorescent fixtures. Based on the age of the Site buildings, there is a low probability that light fixtures include PCB-containing capacitors in light ballasts.

Emergency power in the buildings is provided by two diesel generators. The generator for Building I is located in the walled electrical compound in the south parking lot. The generator for Building J is located on the building roof. Diesel fuel for the generators is stored within integral above ground tanks; no evidence of diesel fuel leaks was readily apparent. Natural gas-fired hot water tanks, located in the central mechanical 'closet' of both buildings, appeared to provide the hot water.

No readily observable hazardous materials were noted.

7.2.2 Eastern Parcel

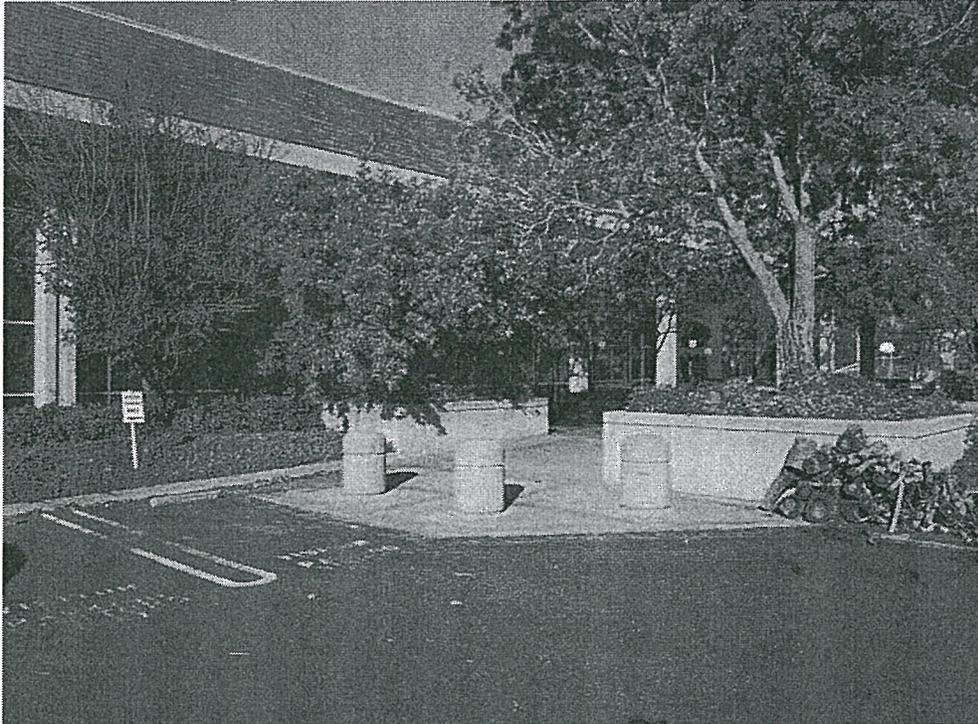
The eastern parcel is vacant land consisting of exposed fill, gravel, grass and asphalt-paved areas. A square-shaped area surrounded by a chain-link fence is located in the southeastern portion of the Site (location of the engineered land cap). In addition, four electrical transmission towers are located in the northern and eastern portions of the Site. A 55-gallon drum containing an oily fluid also was observed on-Site. A metal storage/shipping container also was present; the interior of the storage container was not readily accessible/observed.

Table 10. Summary of Readily Observable Site Features

General Observation	Comments
Aboveground Storage Tanks	Diesel ASTs integrated into backup generators.
Agricultural Wells	Not Observed
Air Emission Control Systems	Not Observed
Boilers	Not Observed
Burning Areas	Not Observed
Chemical Mixing Areas	Not Observed
Chemical Storage Areas	Not Observed
Clean Rooms	Not Observed
Drainage Ditches	Not Observed
Elevators	One elevator was observed in each building; additionally, a wheelchair lift was observed in the stage area of the Auditorium of Building J.
Emergency Generators	Emergency power is provided by backup diesel generators. The generator for Building I is located in the walled electrical compound in the south parking lot. The generator for Building J is located on the building roof.
Equipment Maintenance Areas	Not Observed
Fill Placement	Fill appears to have been placed on the eastern parcel.
Ground Water Monitoring Wells	Several monitoring wells were observed on the eastern parcel
High Power Transmission Lines	Not Observed
Hoods and Ducting	Not Observed
Hydraulic Lifts	A chair lift was observed at the auditorium of Building J.
Incinerator	Not Observed
Petroleum Pipelines	Not Observed
Petroleum Wells	Not Observed
Ponds or Streams	Not Observed
Railroad Lines	A Southern Pacific Railroad corridor was observed to the south of the Site.
Row Crops or Orchards	Not Observed
Stockpiles of Soil or Debris	Not Observed
Sumps or Clarifiers	Not Observed
Transformers	Electrical service enters the buildings from two ground-mounted, what appear to be privately owned transformers located in a walled mechanical compound in the south parking lot. Numerous floor-mounted step-down transformers were observed in mechanical areas throughout both buildings.
Underground Storage Tanks	Not Observed
Vehicle Maintenance Areas	Not Observed
Vehicle Wash Areas	Not Observed
Wastewater Neutralization Systems	Not Observed

The comment "Not Observed" does not warrant that these features are not present on-Site; it only indicates that these features were not readily observed during the Site visit.

7.2.3 Site Photographs



Photograph 1. 312 Constitution Drive (Building I).



Photograph 2. 313 Constitution Drive (Building J).



Photograph 3. Courtyard between Buildings I and J.



Photograph 4. Typical Atrium



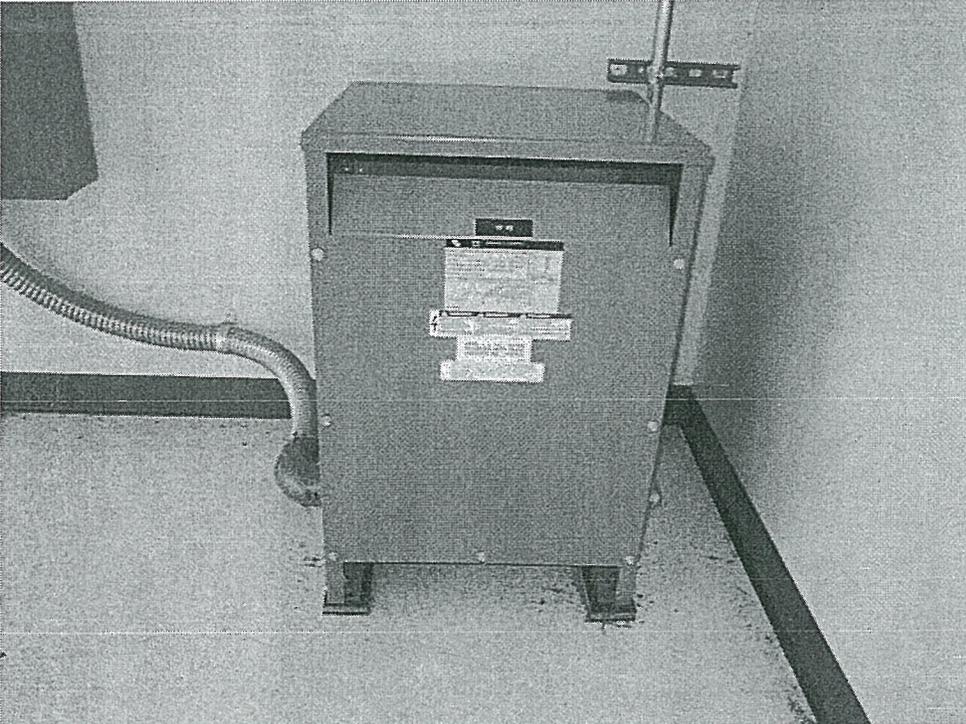
Photograph 5. Typical Elevator



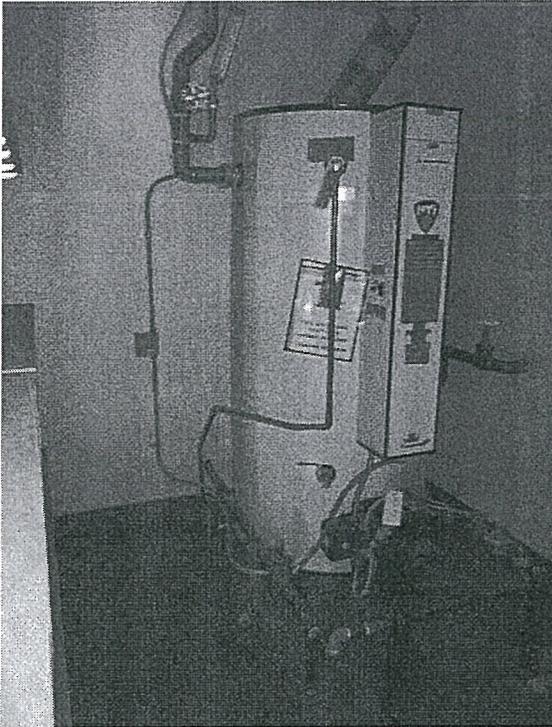
Photograph 5. Typical Lab Space



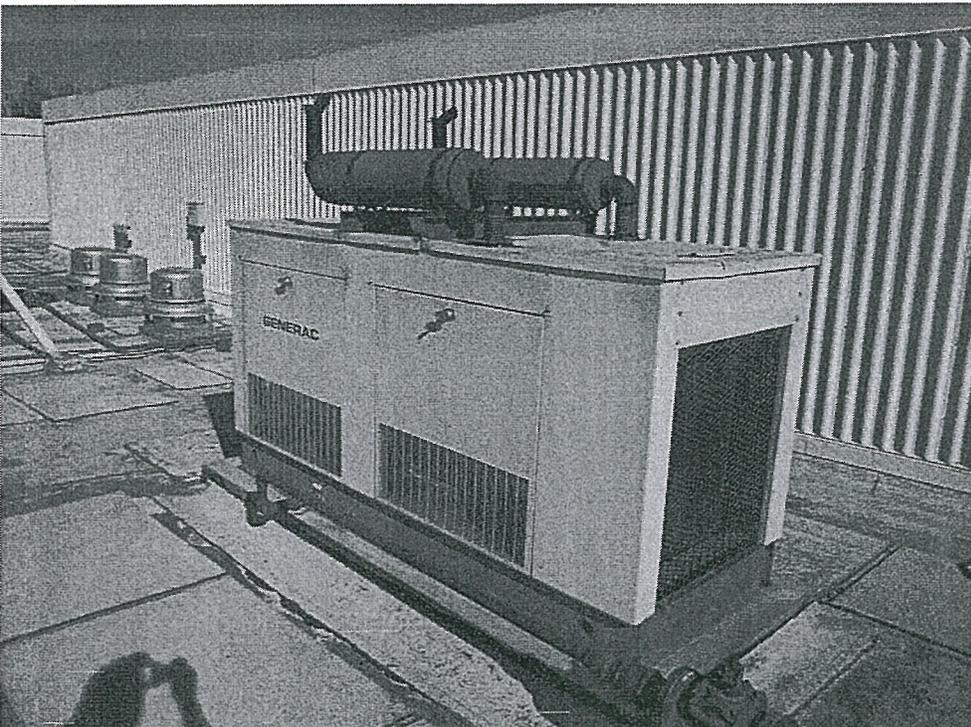
Photograph 6. Chair lift in Building J



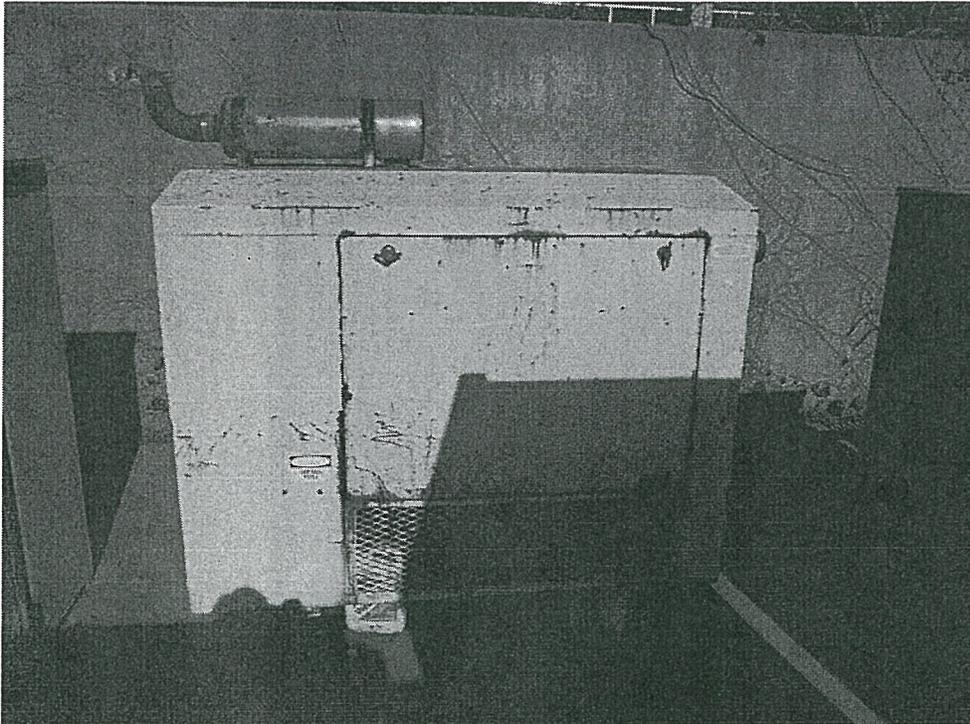
Photograph 7. Typical Floor Mounted Transformer



Photograph 8. Typical Gas Water Heater



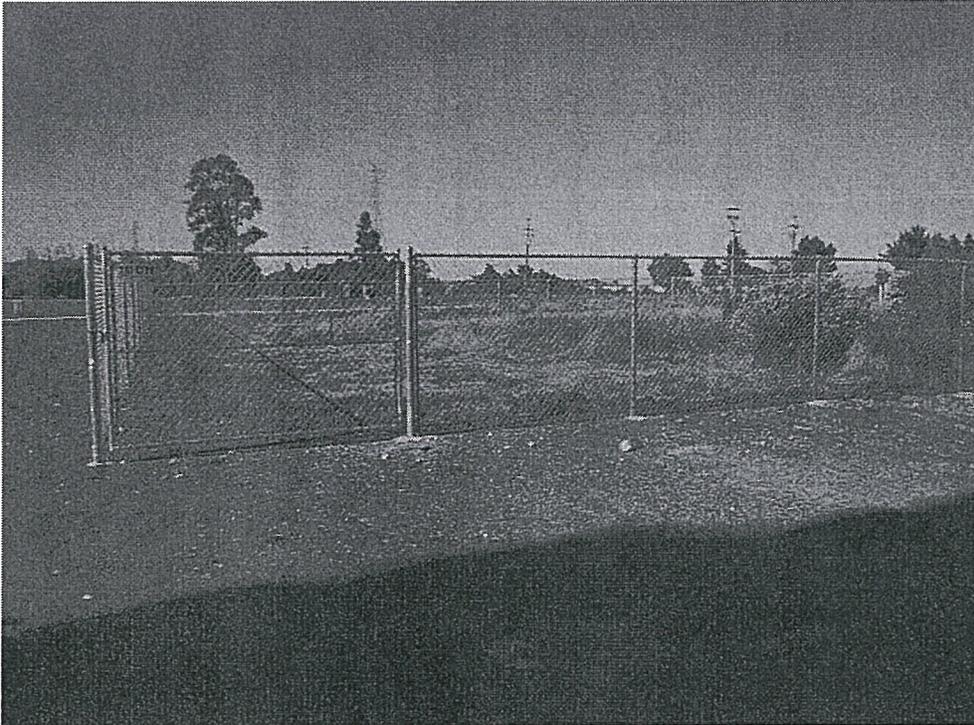
Photograph 9. Generator on Building I Rooftop



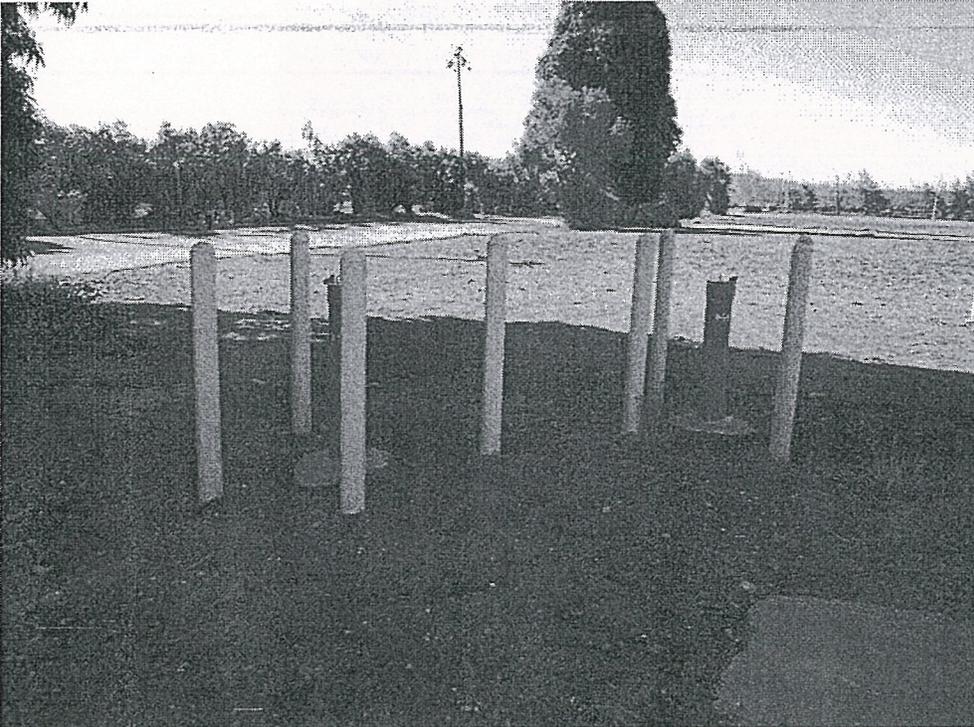
Photograph 10. Generator in Outdoor Compound in South Parking Lot



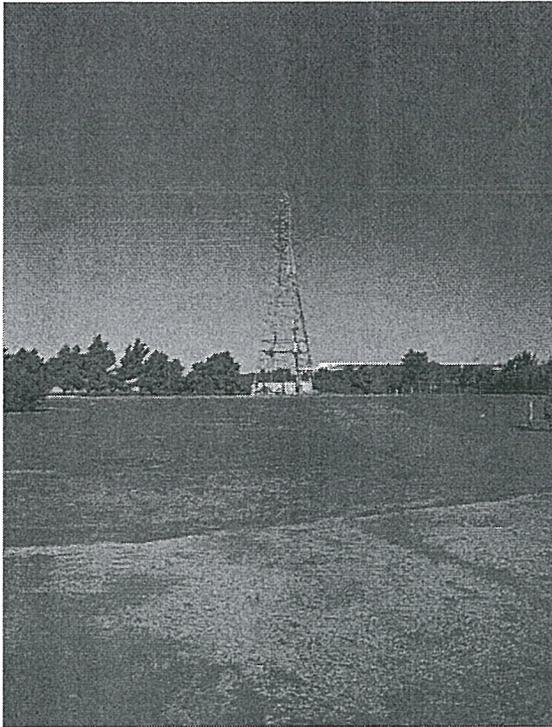
Photograph 11. Transformer in Outdoor Compound in South Parking Lot



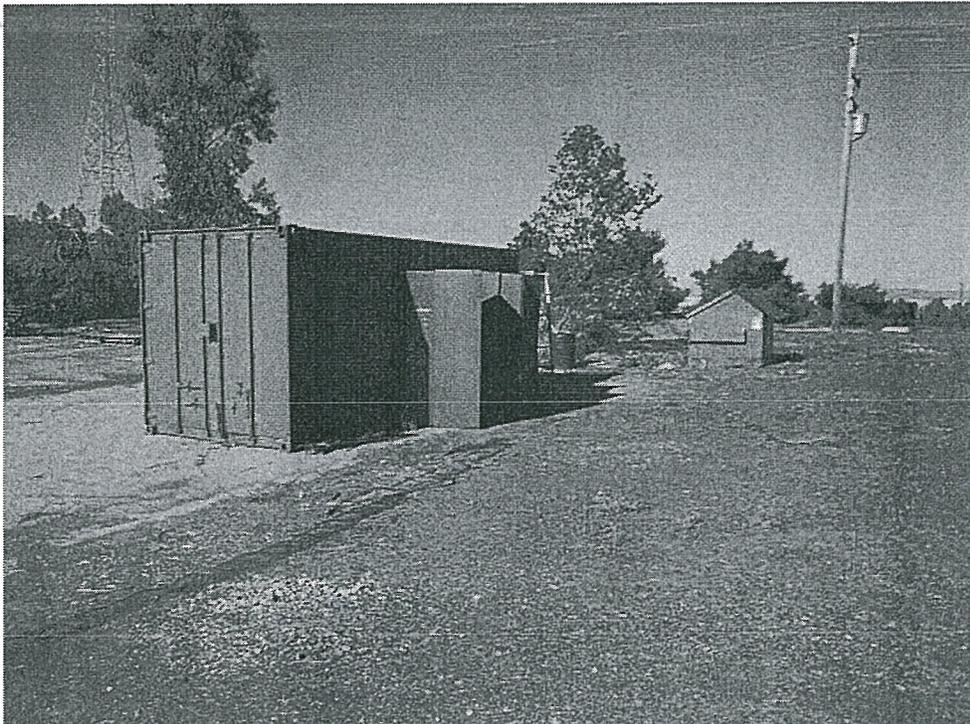
Photograph 12. Area of Capped PCB Impacted Soil on Eastern Parcel



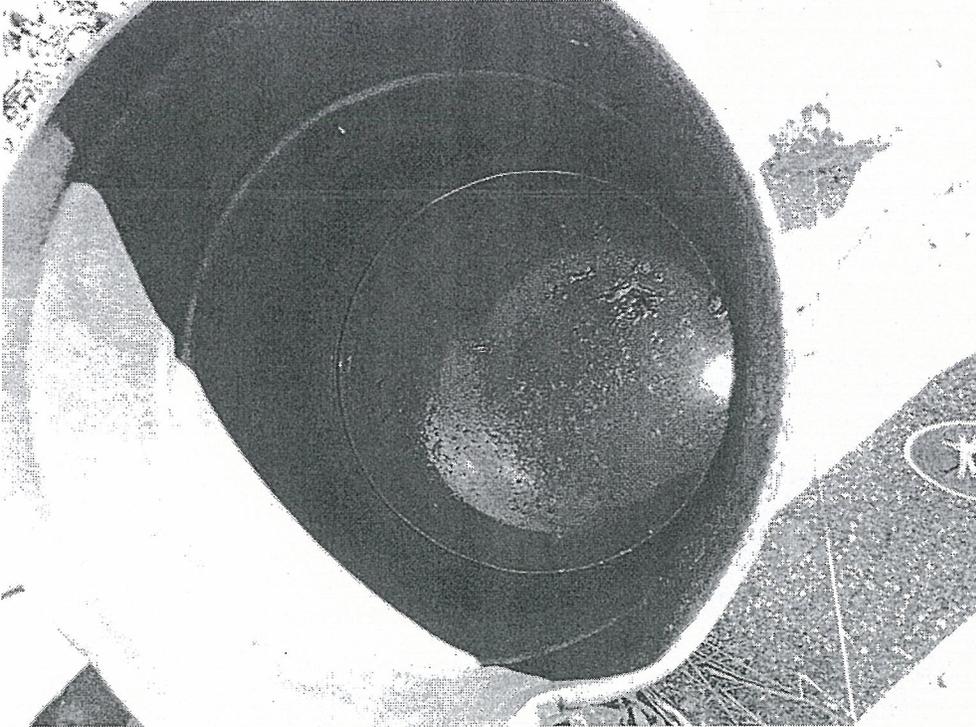
Photograph 13. Monitoring Wells on Eastern Parcel



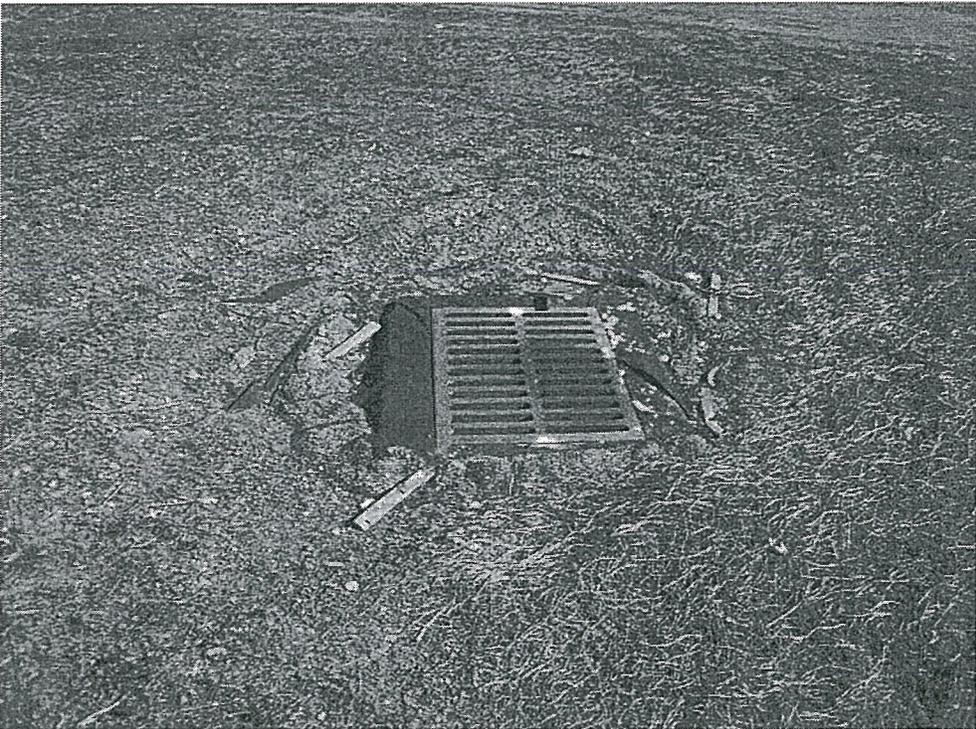
Photograph 14. Transmission Tower on Eastern Parcel



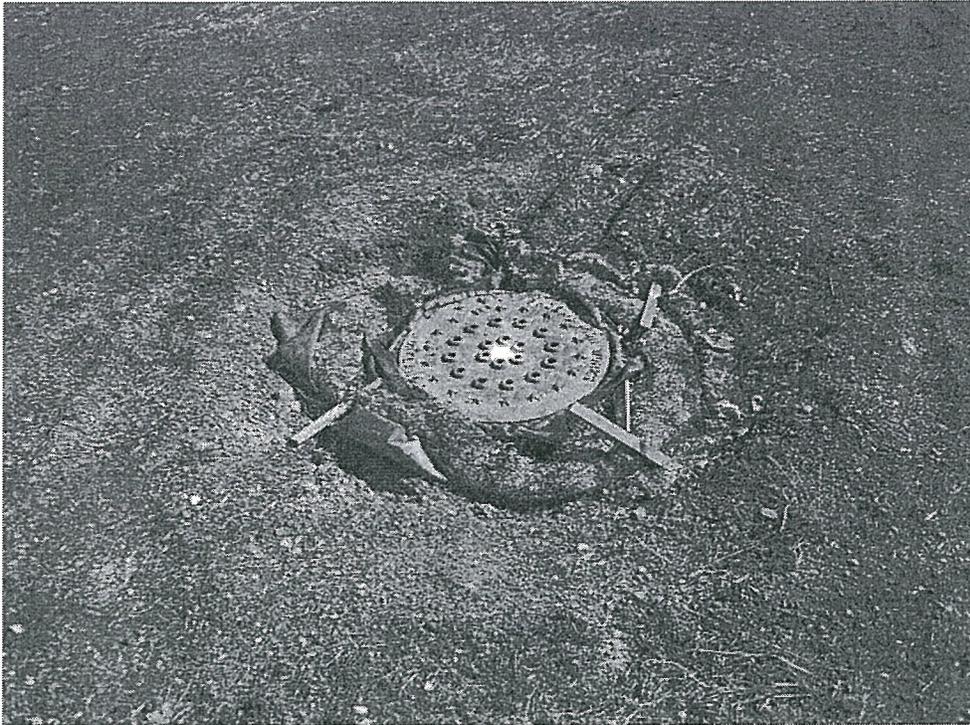
Photograph 15. Outdoor Storage Structures on Eastern Parcel



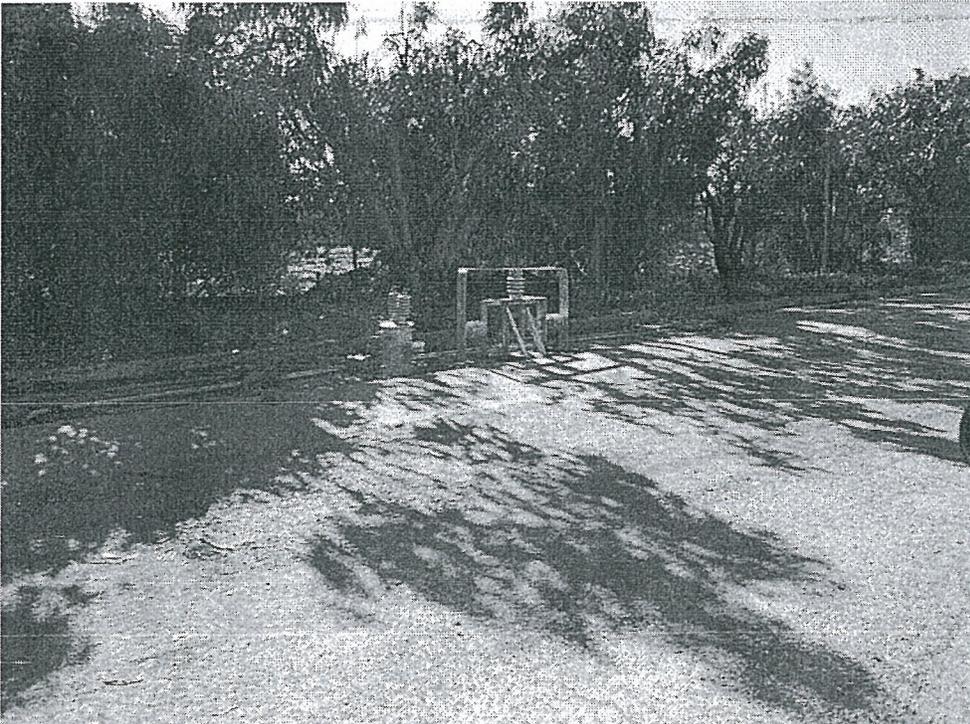
Photograph 16. 55-Gallon Drum with Oily Fluid on Eastern Parcel



Photograph 17. Typical Storm Water Catch Basin



Photograph 18. Typical Utility Cover



Photograph 19. Electrical Equipment on Constitution Drive

SECTION 8: INTERVIEWS

8.1 ENVIRONMENTAL QUESTIONNAIRE

To help obtain information on current and historical Site use and use/storage of hazardous materials on-Site, we provided an environmental questionnaire Mr. John Kovaleski of Colliers International (real estate agent for the seller). He reportedly forwarded the questionnaire to the Site owner for completion. The completed questionnaire was not returned to us as of the date of this report.

8.2 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS

Contact information for previous Site owners and occupants was not provided to us. Therefore, interviews with previous Site owners and occupants could not be performed.

SECTION 9: CONCLUSIONS (FINDINGS) AND RECOMMENDATIONS

Giant Properties reportedly intends to purchase the Site for commercial (office) use. Cornerstone performed this Phase I ESA to support Giant Properties in evaluation of Recognized Environmental Conditions. Our conclusions and recommendations are summarized below.

9.1 HISTORICAL SITE USAGE

Based on information reviewed during this study, the Site historically consisted of marshland associated with San Francisco Bay. The Site was occupied by an asphalt batch plant from the early 1950s to the 1970s. Raychem acquired the Site in 1968; subsequently, buildings and facilities associated with Raychem's ChemPlant were constructed on the eastern portion of the Site. The chemical handling and storage facility on the eastern portion of the Site included a Hazardous Waste Transfer Depot, an Omega Wastewater Treatment System, several solid waste management units, a process wastewater sump, a Therminol Heater/Dowtherm Boiler and five buildings (Buildings N, O, P, U and Y). Tyco acquired Raychem in 1999 and currently operates the facility immediately to the west. Argonaut Holdings acquired the Site in 2007.

Buildings I and J reportedly were constructed on-Site in 1983 and 1988, respectively, and reportedly were used for office purposes and not used for R&D or manufacturing purposes. These two buildings currently remain on-Site and are unoccupied. Buildings I and J were vacated after Tyco acquired Raychem. Tyco leased Building I to Interwave Communications Inc., who reportedly used the building for general office space from approximately 2000 to 2003. Building I reportedly has been vacant since 2003. Tyco leased Building J to Applicast, Inc., who reportedly used the Building for general office space from approximately 2000 to 2002. Building J reportedly has been vacant since 2002. Currently, only the two approximately 60,000 square foot office buildings (Buildings I and J) are located on-Site; the other buildings have been demolished to prepare the Site for potential sale and redevelopment.

9.2 DISCUSSION OF ENVIRONMENTAL SETTING

On the eastern portion of the Site, large quantities of hazardous materials were historically used, stored and handled during occupancy by Raychem and subsequently Tyco.

Past chemical releases resulted in impacts to on-Site soil and ground water. As discussed in Section 4.2, numerous soil and ground water quality investigations have been conducted on-Site and various remedial measures have been implemented. DTSC on November 30, 2006 approved remaining remedial measures to be implemented, which included installation of ground water monitoring wells and periodically conducting ground water monitoring, entering into a LUC, annual LUC inspections, and Tyco providing financial assurance (\$994,000 letter of credit). The documents reviewed indicate that, except for the on-going obligations (i.e., periodic ground water monitoring and annual inspections, etc.), the required remedial measures have been completed.

The LUC restricts the use of the property to commercial and industrial purposes only, prohibits excavation and other earth-moving activities unless pre-approved by the DTSC, and specifically prohibits any activity that may disturb or adversely affect the integrity of the engineered cap located on-Site. The LUC runs with the land and binds all present and future owners in perpetuity.

An engineered cap covers residual concentrations of PCBs at concentrations unacceptable for human health or the environment at a depth of approximately 9½ to 21 feet. This soil has not been excavated reportedly due to the difficulty in dealing with flowing sands and flooding of the excavation, possibly remobilizing and redistributing the PCBs. Note that penetration of the low permeability clay layer could provide a preferential pathway for PCBs to migrate into the first water yielding zone. In addition, please note that DTSC may not allow for this material to be relocated on the Site.

Because the closure for this Site is risk-based, chemically impacted soil and ground water remain in localized areas of the Site. In our opinion, DTSC likely will not allow grading of soil impacted with chemicals exceeding the Site's unrestricted use criteria. Mixing of impacted soil with 'clean' soil likely will not be approved by DTSC. Such impacted soil likely will require consolidation in a specific area of the Site under DTSC oversight or off-Site disposal at a permitted facility.

In addition, other unknown pockets of impacted soil may be encountered during Site redevelopment activities. We recommend meeting with DTSC to determine who (Tyco or Giant Properties) would be responsible for appropriately handling this material. An Operation and Maintenance Plan has been prepared that provides guidance in the event suspect soil is encountered during on-Site earthwork activities. Note that construction workers who may be exposed to Site soil are required to wear a half-face respirator for the first day or until the dust exposure (as measured by real-time instruments) is confirmed to be below 0.5 mg/m³. Depending upon dust concentrations, protection ranges from no respiratory protection to full face protection to suspension of work activities.

Also note that DTSC allows no stockpiling of soil at the Site or ground water extraction. Excavated soil must be stored inside waste bins and appropriately sampled to determine the degree of impact and to facilitate the selection of an appropriate permitted disposal facility. We recommend submitting the protocols for soil grading and ground water extraction (if construction dewatering is required during development) to the DTSC for their review and approval.

As depicted on several of the figures, ground water below portions of the Site (including beneath Building I) is impacted by VOCs from either on-Site sources or from chemical releases on Raychem/Tyco property to the west. As discussed in Section 4.3.1, two adjacent USTs containing gasoline were removed from an off-Site location near the southwest corner of the Site in 1985. Ground water sampling performed at the time of the UST removals suggests that TPHg (detected at 21 ppm) may also be present in ground water near the southwest corner of the Site.

Sub-slab soil vapor samples and indoor air samples are currently being collected from Buildings I and J for laboratory analyses. This work will help evaluate the potential for contaminants to migrate into indoor building spaces from underlying impacted soil and/or ground water.

9.3 REDEVELOPMENT CONSIDERATIONS

9.3.1 Construction of Deep Foundations

If development plans include the construction of deep foundations, the foundation design should incorporate measures to help reduce the potential for the downward migration of the contaminated ground water. These measures should be identified in a geotechnical investigation report and will require approval by the DTSC.

9.3.2 Corrosion

Because of the nature of the hazardous materials and their potential detrimental impacts on utility pipelines, a corrosion study should be performed by a licensed professional engineer to determine protective measures for utilities, which could include wrapping piping with corrosion resistant tape, applying an epoxy coating, using corrosion resistant piping materials (including gaskets, flanges and couplings) and/or installing a cathodic protection system.

9.3.3 Storm Water Pollution Prevention Plan

A storm water pollution prevention plan (SWPPP) is required to be prepared for the Site. Storm water pollution controls should be based on best management practices (BMPs), such as those described in "Information on Erosion and Sediment Control for Construction Projects: A Guidebook" (Water Board 1998) and "Erosion and Sediment Control Field Manual, Third Edition (Water Board 1999). Sediment and erosion control procedures may include, but are not limited to the following:

- Constructing temporary berms or erecting silt fences around exposed soil;
- Placing straw bale barriers or sediment traps around catch basins or other entrances to storm drains;
- Covering soil stockpiles with plastic sheeting or tarps during rainfall events; and
- Implementing other appropriate BMPs.

9.3.4 Excavation De-watering

Prior to excavation de-watering, approval for ground water extraction must be obtained from the DTSC. If excavation de-watering is required, the extracted water will be required to be sampled and analyzed prior to evaluating discharge alternatives. A sample of the ponded water will require laboratory analyses for the COPC; other analyses may be required, based on the intended use of the water. Impacted water may require treatment or disposal at a permitted facility.

9.3.5 Installation of a Vapor Intrusion Barrier

To provide a higher degree of confidence that the health of future occupants of the Site will be protected from the off-gassing of VOCs and/or odors, we recommend considering the installation of gas impermeable membranes and utility trench vapor cut-off barriers to effectively limit vapor/odor intrusion into the proposed structures.

We recommend a vapor barrier with a minimum of a 60 mil, spray-applied, seamless, solvent free membrane. Laboratory data from the manufacturer must be available that documents this material to be a highly effective barrier for the COPC. The membrane should be applied over a non-woven geotextile that will protect it from puncture from the subgrade. A geotextile constructed of polypropylene fibers also should be placed over the 60 mil membrane to help protect it from damage during installation of the overlying concrete slab. To document proper installation of the membrane system, coupon samples of the membrane should be taken at a minimum of every 1000 square feet to verify its thickness. In addition, a smoke test should be performed to verify its integrity.

Appropriate measures also should be implemented to reduce vapor (and ground water) migration through trench backfill and utility conduits. Such measures should include placement of low-permeability backfill "plugs" at intervals on-Site and where utilities extend off current parcel boundaries.

9.3.6 Monitoring Wells

Ground water monitoring wells are located on-Site. This system is used for ongoing ground water monitoring. The development plans must address this remediation network under approval from Tyco and the DTSC. Giant Properties must coordinate with Tyco and DTSC to allow the continued monitoring and possible remediation activities and any additional sampling and analyses that may be required to obtain Site closure. All requirements of the U.S. EPA and the DTSC must be followed.

9.4 OTHER CONSIDERATIONS

9.4.1 Other Activity and Use Limitations

As described in Section 3.2, the provided title report identifies several easements, agreements and covenants that are noted to be associated with the Site. The January 2007 LUC described in Section 4.2.8 appears likely to be the agreement that will have the greatest impact on future uses and development of the Site. Some of the other easements and agreements identified in the title report appear to be related to utilities. However, the purpose of others was not clearly indicated; these also could impact the planned use of the Site and should be reviewed by Giant Properties.

9.4.2 Future Obligations and Liabilities

Potential obligations and liabilities associated with possible changes in future regulatory requirements should also be considered prior to purchasing the Site. Note that the general trend is that cleanup requirements and contaminant concentrations that are considered to be acceptable often become more health-protective over time.

Consideration should be given to purchasing environmental insurance to help protect against the liabilities associated with the known or unknown hazardous materials adversely impacting the Site and the planned development, and for changing regulatory requirements.

9.5 TRANSFORMERS

Several indoor and outdoor transformers were observed. They appear to be privately owned. It was unclear if these transformers were a 'dry type' or 'liquid filled'. In liquid filled transformers, dielectric fluid is used to cool the windings and provide optimal performance. Mixtures of PCBs were typically used in transformer dielectric fluid because of their non-flammable nature and chemical stability. No leaks or spills were observed. EEC (2005) stated, "No transformers with PCB content in fluids at or above regulatory limits remain at the Facility". However, for a higher level of comfort, we recommend that Tyco provide further documentation regarding these transformers or have them inspected for fluid containing PCBs prior to the property transfer.

9.6 ASBESTOS CONTAINING MATERIALS (ACMS)

Due to the age of the on-Site structures, building materials may contain asbestos. If demolition, renovation, or re-roofing of the building is planned, an asbestos survey is required by local authorities and/or National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable ACBMs prior to building demolition or renovation that may disturb the ACBM.

9.7 LEAD-BASED PAINT

The Consumer Product Safety Commission banned the use of lead as an additive in paint in 1978. Based on the age of the buildings, lead-based paint may be present. If demolition is planned, the removal of lead-based paint is not required if it is bonded to the building materials. However, if the lead-based paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations must be followed; these include requirements for worker training, air monitoring and dust control, among others. Any debris or soil containing lead must be disposed appropriately.

9.8 FILL MATERIALS

Based on an historical aerial photograph review conducted by EEC (2010), an apparent former pond or low-lying wet area was noted north of the former location of the asphalt batch plant on-Site from at least 1956 until sometime prior to 1974. No information reportedly is available regarding the source or nature of materials used to fill this area and whether they were placed as loose material or compacted engineered fill. The potential presence of unsuitable fill should be considered prior to future redevelopment activities in this area.

From April to June 2005, an additional approximately 1 to 1 ½ feet of 'DTSC approved' fill was placed over most of Area 6. No information was reviewed regarding whether this material was placed as loose material or compacted engineered fill. The IRM excavations were reportedly backfilled with compacted engineered fill from sources likely approved by DTSC.

9.9 OTHER HAZARDOUS MATERIALS

Two emergency generators were observed on-Site, each with an integral above ground diesel storage tank. No evidence of significant diesel fuel leaks was readily apparent. The generators likely provide emergency power for life safety systems. Two elevators and a chair lift also were observed on-Site; the elevator pits were not accessible.

Due to the small volumes of hazardous materials currently used at this facility, in our opinion, there is a low potential that these areas would be a source of significant contamination. However, these areas should be periodically inspected for leaks or other damage as part of normal Site maintenance activities. Appropriate procedures and control measures should be taken by vendors that service the elevators, generators and chair lift to minimize incidental spills or releases of oil. Spill equipment should be kept readily available near the emergency generators to absorb or contain releases, if any.

In addition, an opened and partially full drum of what appeared to be an oily fluid was observed on the eastern parcel. This drum should be appropriately removed from the Site by the seller prior to the property transfer.

9.10 ELECTRIC TRANSMISSION LINES

High power electric transmission lines were observed on the eastern parcel. While electromagnetic fields (EMFs) occur naturally and are present in everything from visible light to radio waves to X-rays, attention has focused on whether exposure to EMFs associated with alternating-current electricity is hazardous.

Electric current traveling in transmission lines produces both electric and magnetic fields, and some studies have found an association between exposure to electric and magnetic fields and health problems. Other laboratory and epidemiological studies have found no threshold value, dose response or causative relationship that demonstrates significant adverse physical effect from EMFs.

In recent years, there has been considerable controversy regarding the potential health effects resulting from long-term exposure to electromagnetic fields (EMFs). There is no basis at this time to conclude that future employees on the Site would be exposed to significant EMF-related hazards. However, the presence of the lines may negatively impact public perception.

9.11 FORMER ASPHALT BATCH PLANT

From the 1950s to late 1960s/early 1970s, the general area occupied by Building I and Building J was occupied by an asphalt batch plant. Three borings were advanced in the general area of Building J (GRA 2002). Soil samples were collected at several depths to approximately 6 feet. PCBs, VOCs and Semi-VOCs were not reported in the samples analyzed by the laboratory. TRPH was detected in 4 of 4 samples collected from a depth of approximately 0.6 to 5.6 feet (ranging from 16.8 mg/Kg to 151 mg/Kg). The residential ESL for TRPH ranges from 83 mg/Kg to 370 mg/Kg; the commercial ESL ranges from 83 mg/Kg to 2,500 mg/Kg; no information was provided if a silica gel cleanup was performed to remove naturally occurring petroleum hydrocarbons. Dioxins were detected in the two borings advanced near Building J. The TCDD toxic equivalency for the sample collected closest to Building J (DP-291) did not exceed the residential CHHSL of 0.0000046 mg/Kg; a sample collected at a depth of approximately 0.6 feet from a boring located on a former access road (DP-292) revealed a TCDD toxic equivalency of 0.0000067 mg/Kg, which exceeds the residential CHHSL but not the commercial CHHSL. However, several dioxins were reported as non-detected by the laboratory but shown as present in the total dioxins column; it appears that GRA likely used a portion of the laboratory detection limits in their calculation of the total dioxin concentration, suggesting that the 0.0000067 mg/Kg concentration may be conservatively calculated. In addition, dioxins in small concentrations are ubiquitous in the environment and the reported concentrations may represent background conditions. Five samples were analyzed for total metals. Cadmium (2.5 and 3.39 mg/Kg – residential CHHSL of 1.7 mg/Kg and commercial CHHSL of 7.5 mg/Kg), nickel (365 and 458 mg/Kg – residential CHHSL at 1,600 mg/Kg) and total chromium (611 and 700 mg/Kg – residential RSL of 280 mg/Kg and commercial RSL of 1,400 mg/Kg) also appeared elevated but, in our opinion, these results could be representative of natural background conditions.

Please note that the historical presence of an asphalt batch plant and these results were presented to DTSC; we did not review any document indicating that DTSC required additional work in this area.

To further evaluate potential historic impacts from this batch plant, we recommend reviewing the boring logs from the geotechnical investigation for Buildings I and J, if this information is available, to evaluate if indications of petroleum hydrocarbon contamination were noted. For a higher level of comfort, we recommend collecting soil and ground water samples to further document current baseline conditions prior to the property transfer.

9.12 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY

Based on the information obtained during this study, impacted ground water resulting from chemical releases on Raychem/Tyco Property to the west has migrated below the western portion of the project Site. No other hazardous material incidents have been reported in the Site vicinity that would be likely to significantly impact the Site. However, as is typical to many commercial areas, several facilities in the vicinity (including ongoing operations at the westerly adjacent Raychem/Tyco Property) were reported as hazardous materials users. If leaks or spills occur at these facilities, contamination could impact the Site, depending upon the location of the release, the magnitude of the release, and the effectiveness of cleanup efforts.

9.13 DATA GAPS

ASTM Standard Designation E 1527-05 requires the environmental professional to comment on significant data gaps that affect our ability to identify Recognized Environmental Conditions. A

data gap is a lack of or inability to obtain information required by ASTM Standard Designation E 1527-05 despite good faith efforts by the environmental professional to gather such information. A data gap by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. The following data gaps were identified:

- Contact information for the former occupants and owners of the Site was not provided to us. We understand that this information is not reasonably obtainable.
- The environmental questionnaire was not returned for our review.
- Several areas of the Site were not readily accessible.

Based on the numerous Site documents made available to us, we do not consider the above data gaps to be significant.

9.14 DATA FAILURES

As described by ASTM Standard Designation E 1527-05, a data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Data failures are not uncommon when attempting to identify the use of a Site at five year intervals back to the first use or to 1940 (whichever is earlier). ASTM Standard Designation E 1527-05 requires the environmental professional to comment on the significance of data failures and whether the data failure affects our ability to identify Recognized Environmental Conditions. A data failure by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. No significant data failures were identified during this Phase I ESA.

9.15 RECOGNIZED ENVIRONMENTAL CONDITIONS

Cornerstone has performed a Phase I Environmental Site Assessment in general conformance with the scope and limitations of ASTM E 1527-05 of 312-314 Constitution Drive, Menlo Park, California. This assessment identified the following Recognized Environmental Conditions; however, please read the entire report for an overview of the Site.

- Soil and ground water at the Site have been impacted by past commercial/industrial uses of the Site. Several remedial measures have been completed at the Site and the DTSC has approved the Site for future commercial use. A LUC has been established that restricts the use of the property to commercial and industrial purposes and outlines several requirements that pertain to development, and future operation and maintenance of the Site.

SECTION 10: LIMITATIONS

Cornerstone performed this Phase I ESA to support Giant Properties in evaluation of Recognized Environmental Conditions associated with the Site. Giant Properties understands that no Phase I ESA can wholly eliminate uncertainty regarding the potential for Recognized Environmental Conditions to be present at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions. Giant Properties understands that the extent of information obtained is based on the reasonable limits of time and budgetary constraints.

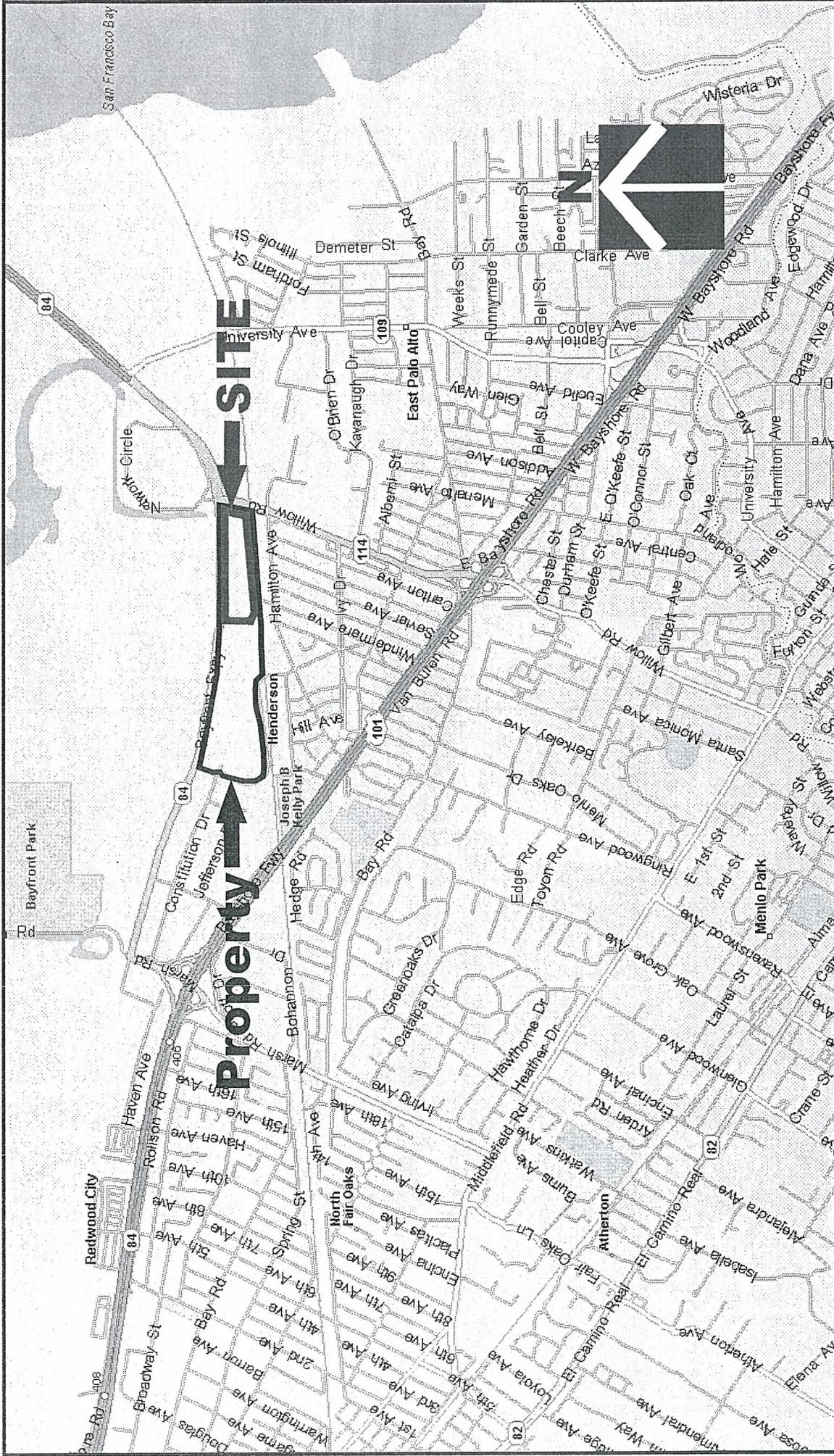
Conclusions presented in this report are based on selected, readily available information and conditions readily observed at the time of the Site visit. Phase I ESAs are inherently limited because findings are developed based on information obtained from a non-intrusive Site evaluation. Cornerstone does not accept liability for deficiencies, errors, or misstatements that have resulted from inaccuracies in the publicly available information or from interviews of persons knowledgeable of Site use. In addition, publicly available information and field observations often cannot affirm the presence of Recognized Environmental Conditions; there is a possibility that such conditions exist. If a greater degree of confidence is desired, soil, ground water and/or soil vapor samples should be collected by Cornerstone and analyzed by a state-certified laboratory to establish a more reliable assessment of environmental conditions.

Cornerstone acquired an environmental database of selected publicly available information for the general area of the Site. Cornerstone cannot verify the accuracy or completeness of the database report, nor is Cornerstone obligated to identify mistakes or insufficiencies in the information provided (ASTM E 1527-05, Section 8.1.3). Due to inadequate address information, the environmental database may have mapped several facilities inaccurately or could not map the facilities. Releases from these facilities, if nearby, could impact the Site.

Giant Properties may have provided Cornerstone environmental documents prepared by others. Giant Properties understands that Cornerstone reviewed and relied on the information presented in these reports and cannot be responsible for their accuracy.

This report, an instrument of professional service, was prepared for the sole use of Giant Properties and may not be reproduced or distributed without written authorization from Cornerstone. It is valid for 180 days. An electronic transmission of this report may also have been issued. While Cornerstone has taken precautions to produce a complete and secure electronic transmission, please check the electronic transmission against the hard copy version for conformity.

Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.



Project Number

254-5-1

Figure Number

Figure 1

Date November 2010

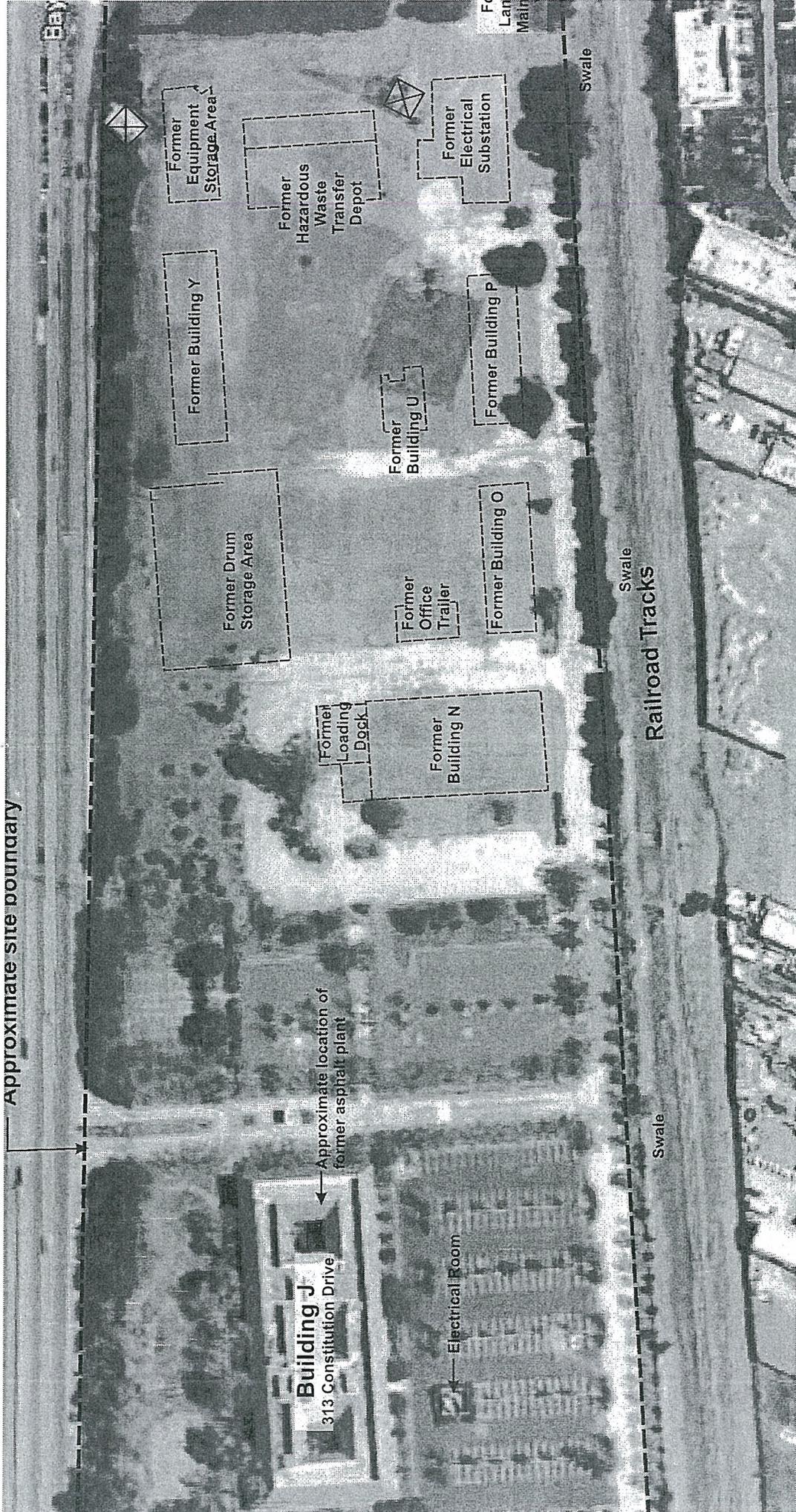
Drawn By FLL

Vicinity Map

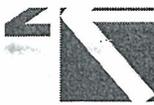
**TYCO Electronics Facility
(Formerly Raychem)
Menlo Park, CA**

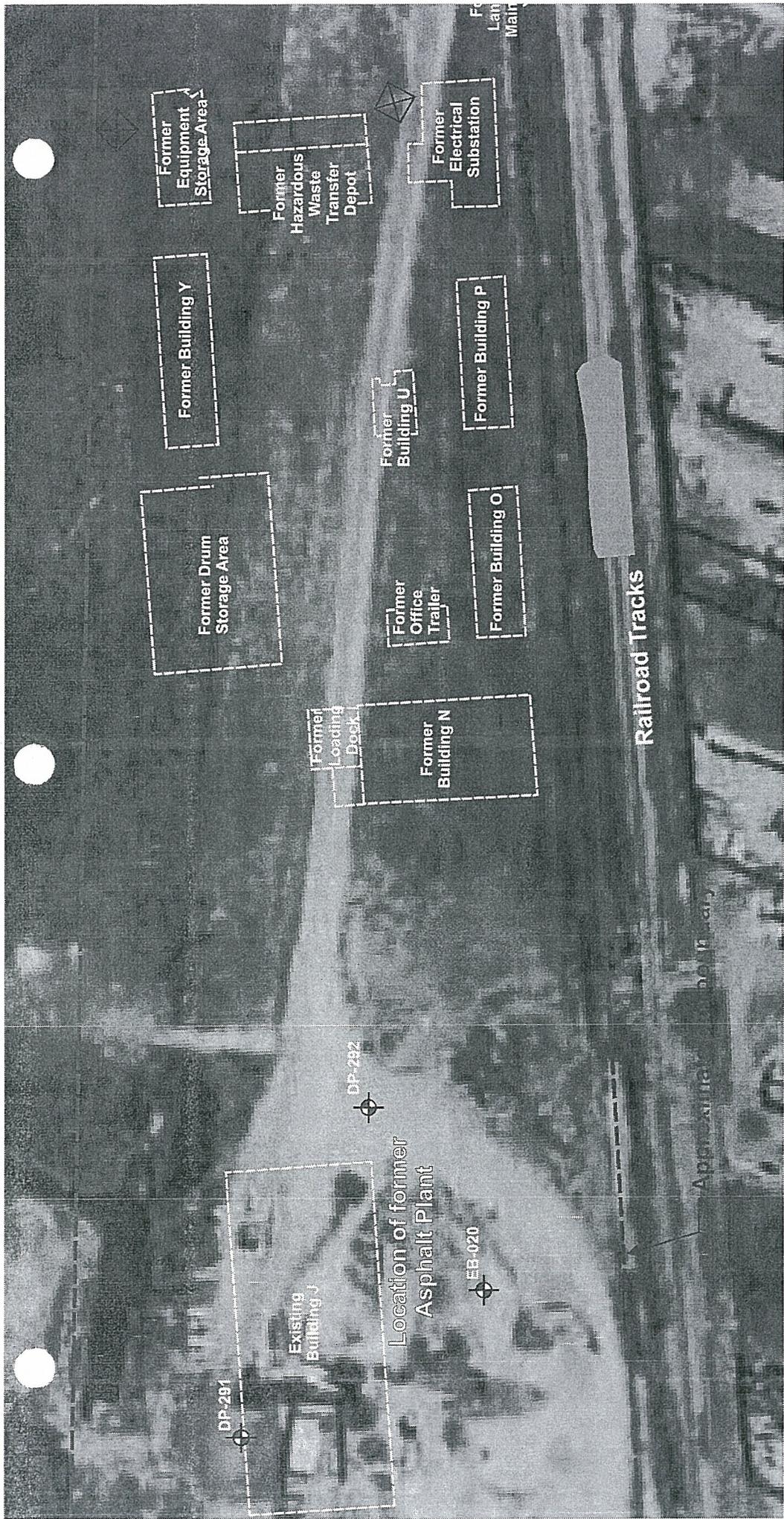
**CORNERSTONE
EARTH GROUP**





r building areas from SCS Engineers.

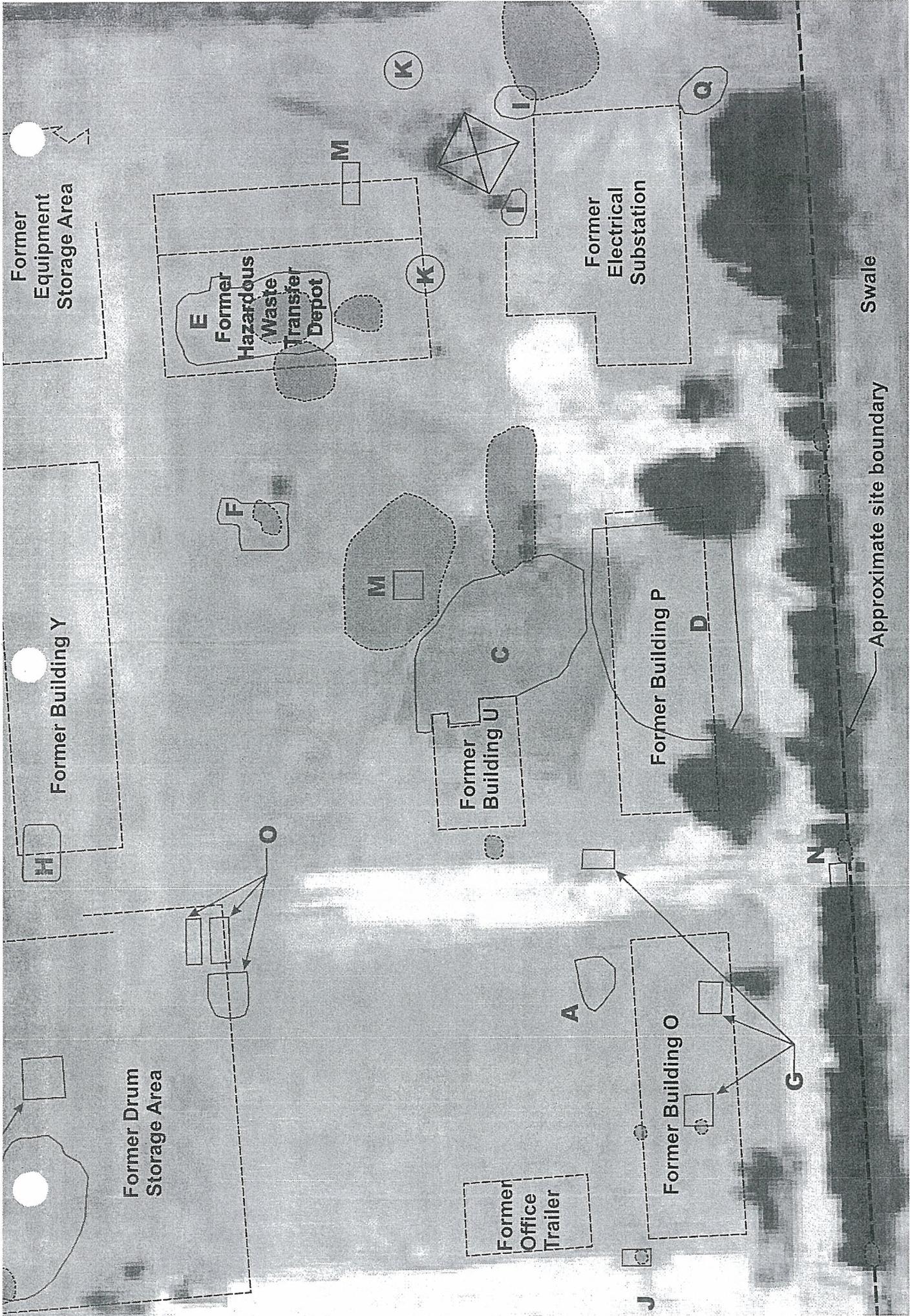


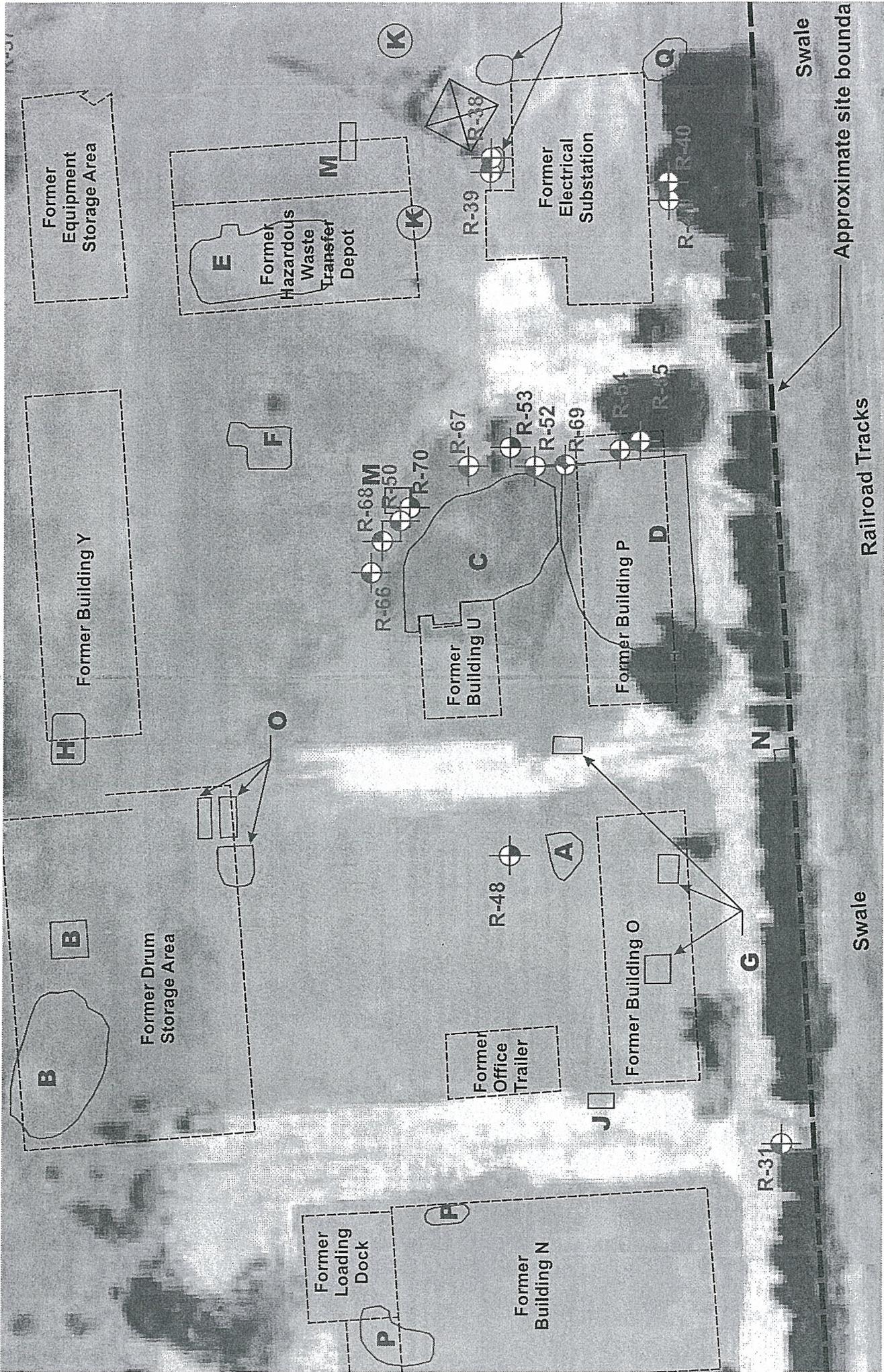


GRA Associates. Building locations from SCS Engineers.

Legend
 Date location of Environmental Borings (GRA 2002)







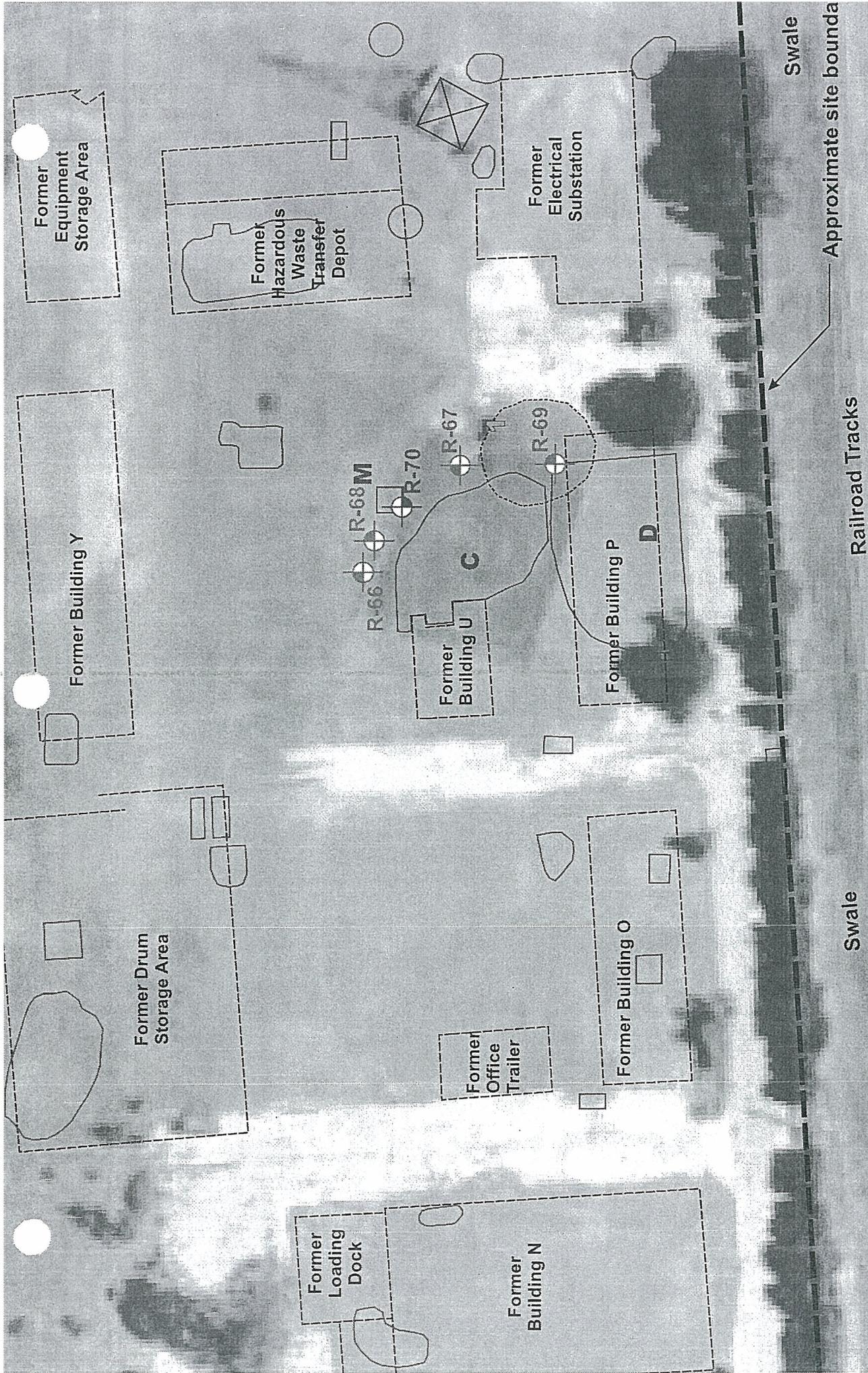
by GRA Associates February 2010.

Legend

- ⊕ Approximate location of Monitoring Well screened in Upper Alpha (UA) Unit of Alpha Water-Bearing Zone
- ⊕ Approximate location of Monitoring Well screened in Lower Alpha (LA) Unit of Alpha Water-Bearing Zone



Existing Ground
TYC



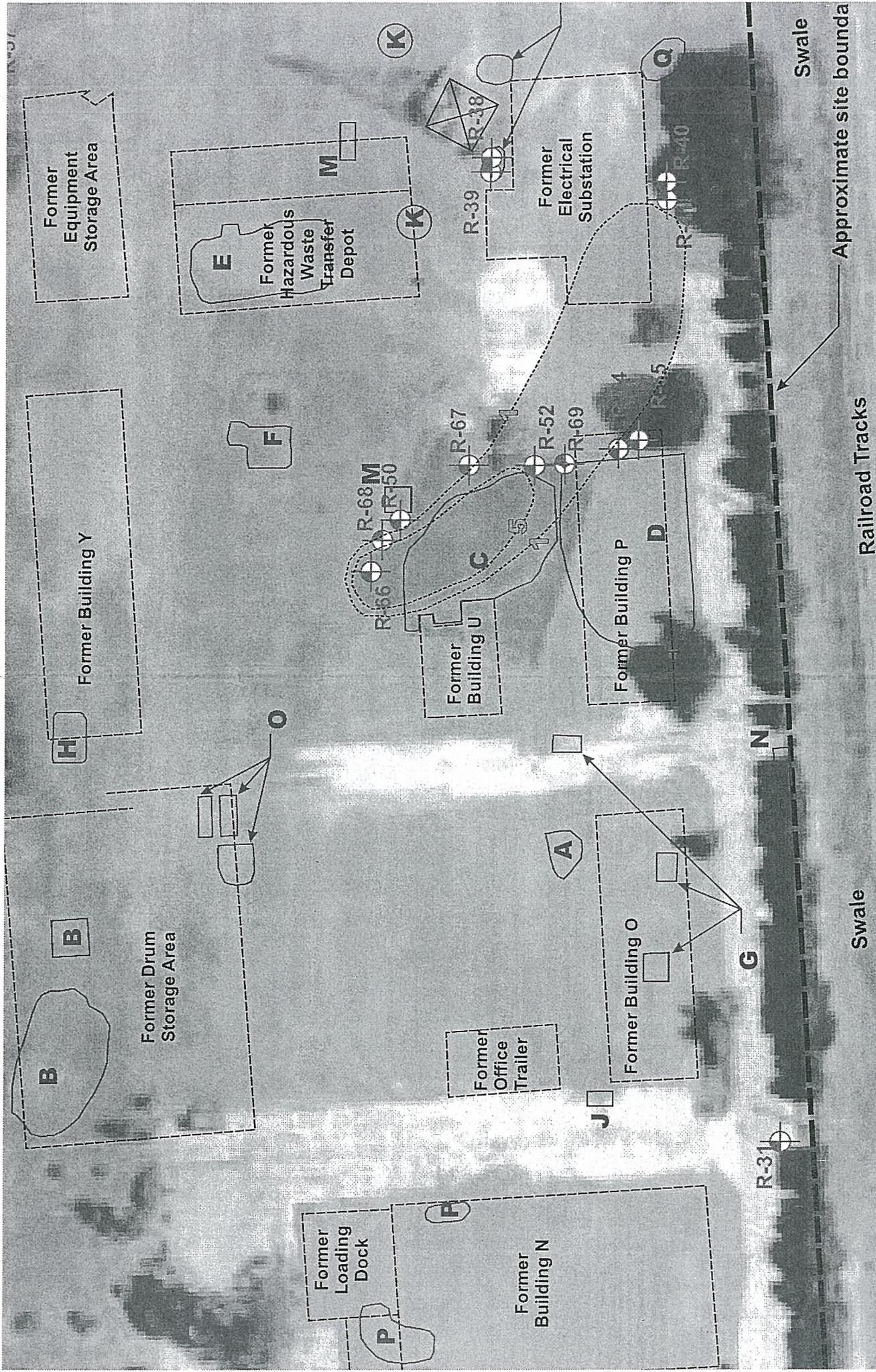
ations by GRA Associates February 9, 2010.

Legend

- ⊕ Approximate location of Monitoring Well screened in Upper Alpha (UA) Unit of Alpha Water-Bearing Zone
- ⊕ Approximate location of Monitoring Well screened in Lower Alpha (LA) Unit of Alpha Water-Bearing Zone



Total PCB	(
	TYC
	(



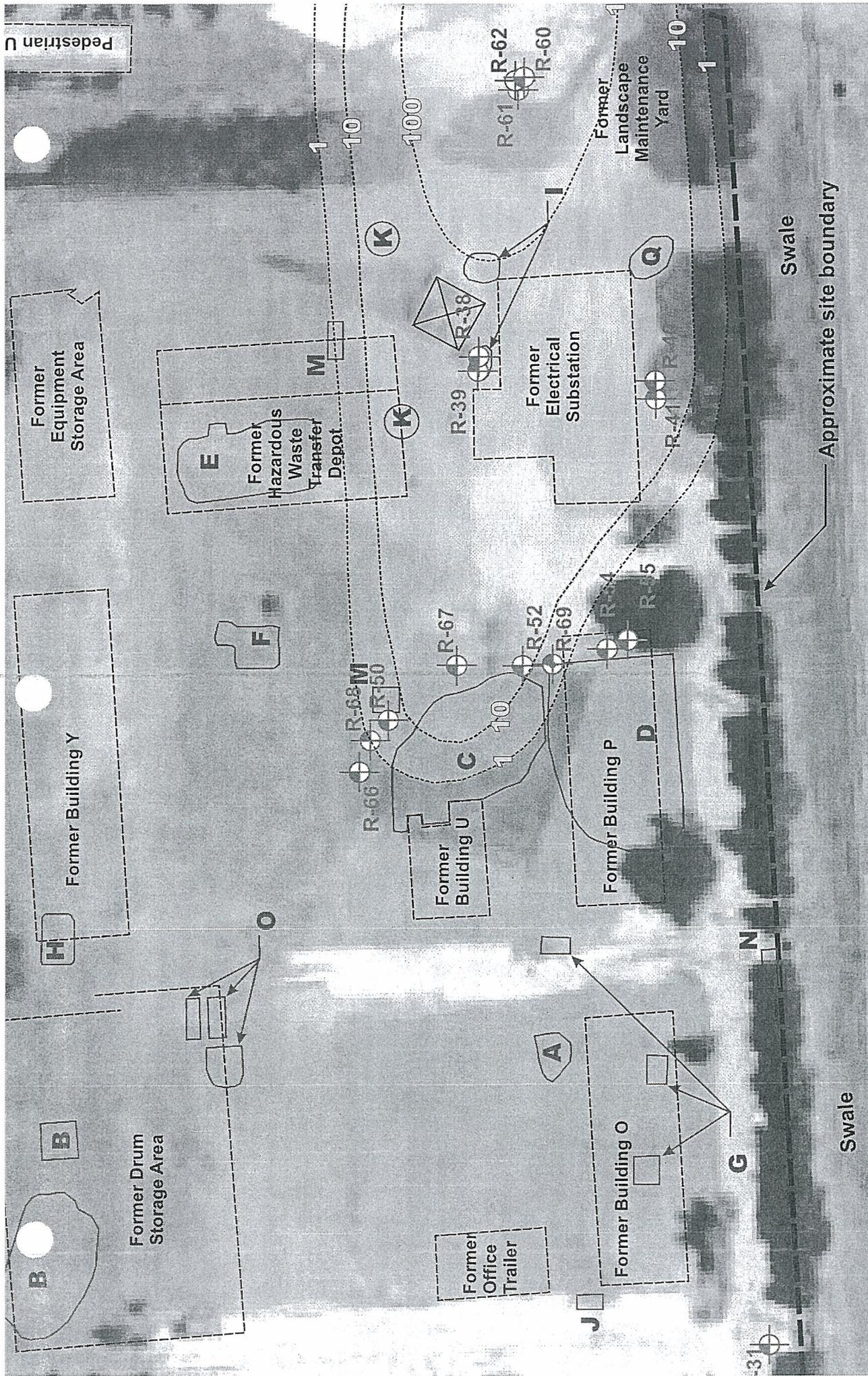
Concentrations by GRA Associates March 2007.

Legend

- ⊕ Approximate location of Monitoring Well screened in Upper Alpha (UA) Unit of Alpha Water-Bearing Zone
- ⊕ Approximate location of Monitoring Well screened in Lower Alpha (LA) Unit of Alpha Water-Bearing Zone



Total PCB (Alpha)	TYC
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Concentrations by GRA Associates, April 2007.

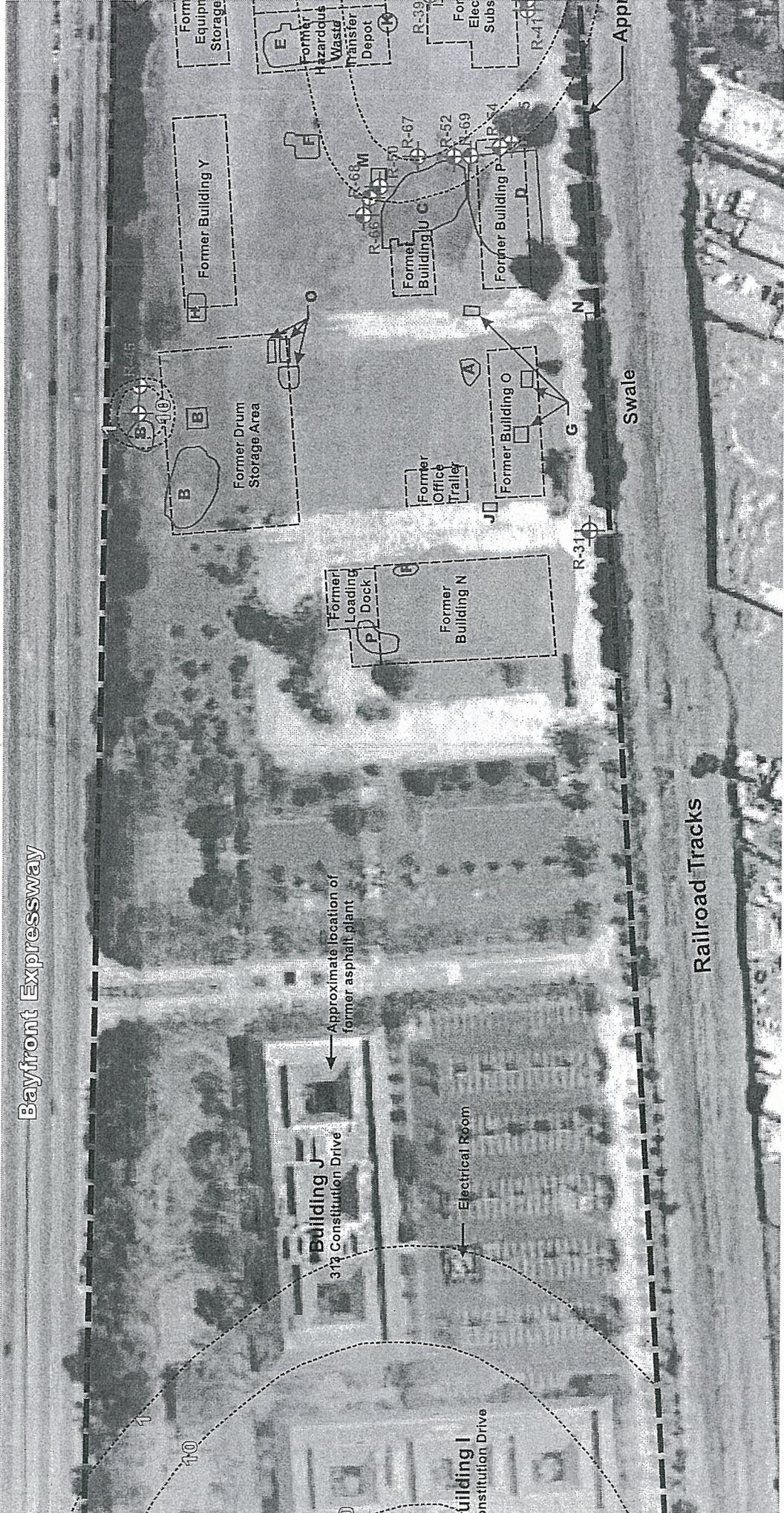
Legend

- ⊕ Approximate location of Monitoring Well screened in Upper Alpha (UA) Unit of Alpha Water-Bearing Zone
- ⊕ Approximate location of Monitoring Well screened in Lower Alpha (LA) Unit of Alpha Water-Bearing Zone

Chlorobenzene (Alpha)	TYC
	()



Bayfront Expressway



GRA Associates March 2007.

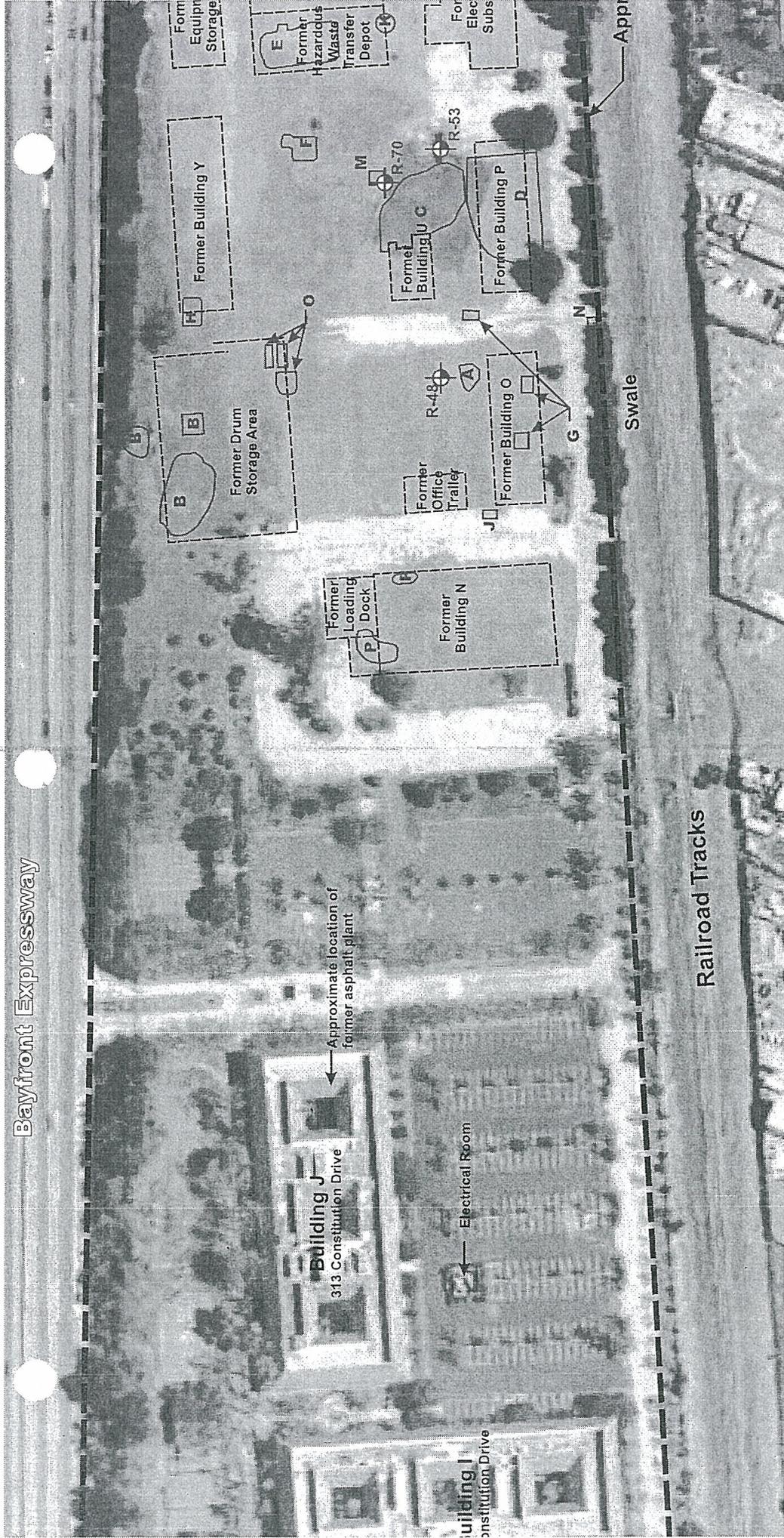
Legend

- ⊕ Approximate location of Monitoring Well screened in Upper Alpha (UA) Unit of Alpha Water-Bearing Zone
- ⊕ Approximate location of Monitoring Well screened in Lower Alpha (LA) Unit of Alpha Water-Bearing Zone
- Approximate isoconcentrations of Total Volatile Organic Compounds in ground water, in micrograms per liter (µg/L)

To
(Alpha
TYC
(



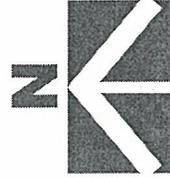
Bayfront Expressway



GRA Associates March 2007.

Legend

- ⊕ Approximate location of Monitoring Well screened in Upper Beta (UB) Unit of Beta Water-Bearing Zone
- ⊙ Approximate location of Monitoring Well screened in Lower Beta (LB) Unit of Beta Water-Bearing Zone
- Approximate isoconcentrations of Total Volatile Organic Compounds in ground water, in micrograms per liter (µg/L)



To	TYC
(By:)	(



Base Aerial (August 1957) by GRA Associates. Building locations from SCS Engineers.

