

Alameda County

OCT 07 2002

Environmental Health

Proj No. 2182

October 2, 2002

Ms. Susan Hugo
Alameda County
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502


Subject: North and East Parking Lots at Heritage Square
Located at 6121 Hollis Street, Emeryville, California

Dear Susan:

Enclosed for your review is a copy of SOMA's "Workplan for the Characterization and Remediation of PCB-Impacted Soils Beneath the North and East Parking Lots at Heritage Square" located at the above address.

Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 244-6600.

Sincerely,



Mansour Sepehr, Ph.D., P.E.
Principal

Enclosure

cc: Mr. Richard K. Smith – Viacom Inc. w/enclosure
Mr. Geoff Sears – Wareham Development w/enclosure
Jeff Groy, Esq. w/enclosure
Mr. Rick Freudenberger – Environmental Strategies w/enclosure



Alameda County

OCT 07 2002

Environmental Health



ENVIRONMENTAL ENGINEERING, INC
2680 Bishop Drive • Suite 203 • San Ramon, CA 94583
TEL (925) 244-6600 • FAX (925) 244-6601

**Workplan for the Characterization and Remediation of
PCB-Impacted Soils Beneath the North and East Parking
Lots at Heritage Square, 6121 Hollis Street
Emeryville, California**

October 1, 2002

Project 2182

Prepared for:


**Viacom Inc.
11 Stanwix Street
Pittsburgh, PA 15222
And
Wareham Development Group
1120 Nye Street, Suite 400
San Rafael, CA 94901**

Prepared by:

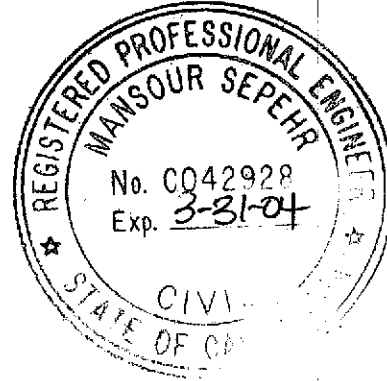
**SOMA Environmental Engineering, Inc.
2680 Bishop Drive, Suite 203
San Ramon, California 94583**

Certification

This report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Viacom Inc. and Wareham Development to comply with Alameda County Health Care Agency's requirements.



Mansour Sepehr, Ph.D., P.E.
Principal Hydrogeologist



LIST OF FIGURES

- Figure 1: Site Vicinity Map
- Figure 2: Site Map Showing the Locations of North and East parking Lots
- Figure 3: Contour Map of PCB Concentrations (ppm) at 0.5' Depth
- Figure 4: Contour Map of PCB Concentrations (ppm) at 3.5' Depth
- Figure 5: Locations of Proposed Soil Borings Before Initiation of Soil Cleanup Process

INTRODUCTION

This workplan has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Viacom Inc. (Viacom), successor to CBS Corporation formerly known as Westinghouse Electric Corporation, which is conducting the remediation and Wareham Development (Wareham) which acts as a development advisor to various affiliates who are the owners of the subject property. This workplan presents the tasks for characterization and remediation of polychlorinated biphenyls (PCB) impacted soils beneath the north and east parking lots on the Heritage Square property located at 6121 Hollis Street, Emeryville, California (the "Property"), see Figure 1.

The Property is located immediately north and east of EmeryStation II formerly known as the Westinghouse Electric Corporation site, located at 5815 Peladeau Street, Emeryville, California. Following the remediation and construction of EmeryStation II (also known as EmeryStation North), in 2000, Viacom conducted extensive field investigations to characterize the horizontal and vertical extent of PCB-impacted soils at the Property.

The north parking lot is located immediately north of the former Westinghouse Electric Corporation site at 5815 Peladeau Street, Emeryville, California. A portion of this parking lot, where the current Horton Street extension passes along the western boundary of the Property between 59th and 62nd Streets (about 330 feet long and 46 feet wide) was remediated by Viacom in 2000. The remediation involved the excavation and off-site disposal of PCB-impacted soils. In addition, some remediation was extended beyond the 46-foot wide easement into the Heritage Square parking lot to allow for sidewalk installation and landscaping activities along saw cut and grade match lines. In addition, utility trenches including storm, sanitary, electric, gas and telephone lines were installed under the roadway, which extends from EmeryStation II to 62nd Street. Figure 2 shows the location of the Horton Street Extension as well as the remainder of the north parking lot, which will be remediated by Viacom according

to this workplan.

SOMA's report, entitled "Delineation of the Extent of PCBs Contamination at the Heritage Square Property Located at 6121 Hollis Street, Emeryville, California," dated August 28, 2000, includes the horizontal and vertical (up to 3.5 feet) delineation of the PCB distribution beneath the north parking lot at Heritage Square. Reportedly, the maximum depth of excavation beneath the Horton Street extension for installation of utility lines was 8 feet below ground surface (bgs).

The east parking lot is located between Peladeau and Hollis Streets and is being utilized by the employees of the different office buildings and Bucci Restaurant. In July 2001, under supervision of SOMA's principal Hydrogeologist, SOMA conducted an extensive soil investigation at this parking lot. The results of SOMA investigation were presented in a September 6, 2001 report, entitled "Additional Site Characterization for Delineation of PCB-Impacted Soils Beneath the East Parking Lot Located at 6121 Hollis Street, Emeryville, California". As the results indicated only a small portion of the parking lot has been identified to contain PCB-impacted soil above the cleanup levels at 0.5 feet bgs. Figure 5 shows the area within the east parking lot where soil excavation and remediation are required.

The previous soil borings for vertical delineation of PCB concentrations did not advance deeper than 3.5-4 feet bgs. The maximum depth of borings (4 feet) was selected based on the provisions of the risk assessment document prepared by SOMA in 1996, which assumes that no exposure pathway exists beneath a 4-foot depth. The results of the laboratory analyses on soil samples collected at 0.5 and 3.5-foot depths indicated that the vertical extent of the PCB in the southern and central portion of the north parking lot is beyond the sample depth of 3.5 feet. However, according to the analytical results, minor concentrations of PCB (less than 2.5 mg/Kg) were detected at a 3.5-foot depth in the northern end

of the north parking lot. Within the planned remediation activity in the north parking lot, Figures 3 and 4 show the PCB concentrations at 0.5 and 3.5 feet depth intervals, respectively.

SCOPE OF WORK

The scope of this workplan has been organized in the following tasks:

Task 1: Preparation of Health and Safety Plan

To ensure the health and safety of the drilling and excavation crews, the health and safety plan prepared by SOMA for remediation of the Horton Street Extension remediation will be implemented. In addition, a site-specific health and safety plan will be developed to address all known aspects of construction-related activities associated with the Property, if warranted.

Task 2: Initial Site Preparation and Drilling Additional Soil Borings for Characterization of PCB-Impacted Soils

Before initiating remediation activities, confirmatory soil samples will be collected at certain areas. The purpose of confirmation soil sampling activities is as follows:

- To evaluate the exact boundaries of the excavation area and anticipated depth of excavation;
- To determine if the remediation of soils beneath the existing power generator foundations installed at various areas within the north parking lot is warranted; and
- To determine if the soils surrounding the roots of ornamental trees within the upper 4 feet inside the north parking lot requires remediation. The results of the soil sampling could result in saving the existing ornamental trees at the Property. It appears that based on future construction plans some of the trees located in the central portion of the north parking lot are subjected to extirpation. Therefore, no samples will be collected from beneath those trees.

Figure 5 shows the locations of the proposed soil borings. In addition, before commencement of remediation activities, the remediation area will be fenced off to prevent trespassing and exposure of unauthorized personnel. The secured zone will provide enough space for stockpiling and off hauling the soils following the excavation and testing of the stockpiled soils. Parking spaces for building's tenants will be provided at another location during construction and remediation activities.

As discussed, the maximum depth of soil samples collected for evaluation of the extent of PCB-impacted soil at the Property in the summer of 2000 was about 3.5 feet. At the 3.5-foot depth, PCB concentrations were detected at a maximum of 1,990 mg/Kg at the southern portion of the Property. However, at the central and northern end of the north parking lot, minor (less than 2.5 mg/Kg) concentrations of PCB were detected at the 3.5-foot depth. To evaluate the exact boundary of the excavation zone and evaluate if the ornamental trees can be saved, soil borings to the maximum depth of 4 feet will be drilled.

The soil borings will be drilled using direct push technology (DPT). Soil samples will be collected using brass tubes at .5 and 4-foot depth intervals. Both ends of the brass tubes containing soil samples will be covered with plastic caps and secured with Teflon tapes. The soil samples will be placed in an ice chest and delivered to Curtis & Tompkins Laboratories, a state certified laboratory. Standard Chain of Custody (COC) forms will be filled to indicate the sample name, date, time and sampler and EPA number and type of analyses. To avoid cross contamination, the sampling tools will be decontaminated after drilling and sampling of each soil boring. A total of 20 soil borings (40 soil samples) will be drilled and sampled during this investigation. The soil samples will be analyzed for PCB using US EPA Method 8080. In addition, for profiling purposes required by the landfills, certain soil samples also will be analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), heavy metals

using US EPA Methods 8260, 8270, and 6000/7000, respectively.

Task 3: Remediation of PCB-impacted Soils

The recommended PCB cleanup levels in SOMA's (1996) human health risk document for different land use scenarios will be used as soil cleanup criteria. Table 1 shows the cleanup criteria for different land use scenarios as recommended by SOMA (1996) for the upper 2 feet of soil. From 2 to 4 feet the Apartment dwelling scenario applies.

Table 1
Recommended Soil Cleanup Levels SOMA (1996)
Land Use Scenario
PCB Concentration in mg/Kg

Land Use Type	Soil PCB Cleanup Levels (mg/Kg)
Residential, Single Family Unit	0.5
Commercial	2.85
Apartment Dwelling	59.3*

* Only includes exposure of utility workers inside trenches at a 2-4 foot depth

Therefore, the clean-up criteria for PCB from 0-2 feet depths will be 2.85 mg/Kg and from 2-4 feet will be 59.3 mg/Kg. Initially, the top 2 feet including asphalt pavement with the underlying soils will be excavated and disposed of. At the east parking lot, the remediation may not extend below 2 feet depth. This is based on the results of our previous investigation, which showed low PCB concentrations at 3.5 feet bgs.

In the next step, soil samples will be collected and analyzed to evaluate whether or not the existing residual soil PCB concentrations meet the soil cleanup criteria. The soil excavation will continue below 2 feet up to a 4-foot depth in areas where the residual concentration exceeds the cleanup criteria. According the provisions of human health risk assessment for the site, due to the lack of exposure pathways, no soil excavation and remediation will be conducted below 4 feet depth.

The final sub-grade conditions will be sampled to ensure that the 59.3 mg/Kg PCB cleanup criterion is achieved. The final sampling locations and density of confirmatory sampling points will be decided in the field, after excavation and removal of the PCB-impacted soils exceeding the cleanup criterion. To assist the field crew for rapid assessment of residual PCB levels in the stockpiled soils and beneath the excavation pits, SOMA is planning to utilize PCB kits. The PCB test kits are designed to indicate whether or not the soil contains PCBs in excess of 50 mg/Kg. Given the limitation of the PCB kits, conservatively the soil cleanup levels between a 2 and 4-foot depth interval will be reduced to 50 mg/Kg.

After removal and off-site disposal of PCB-impacted soils, the new fill material will be imported and the excavation will be filled and compacted to the present grade. Then, the entire parking lot will be restored.

To ensure the safety of construction workers and to prevent the excavation areas from collapsing, shoring may be required along the existing office to the east. The soil sample results obtained before commencement of the soil remediation process will reveal the boundaries of the soil excavation limit and will determine the distance between the soil excavation pit and the office building. This information will be used to determine the depth of soil excavation and need for shoring, if warranted. Depending upon the depths of the excavations and the type of shoring, the shoring may remain in place or be removed after backfilling.

During the excavation process, SOMA's Site Safety Officer (SSO) will conduct soil screening tests using a PCB kit called "Clor-N-Soil". The soil screening test results will be used to segregate the soils containing greater than 50 mg/Kg PCB from the soils containing less than 50 mg/Kg. The soils containing greater than 50 mg/Kg PCB will be disposed of at the TSCA facility in Kettleman, California. The soils containing less than 50 mg/Kg PCB will be disposed of at the Altamont Landfill facility in Altamont, California. Additionally, soil screening test kits may be used to assist the field crew for rapid assessment of residual PCB

concentrations beneath the excavation. Using such test kits will reduce the costs and expedite the remediation process.

After excavation of the PCB-impacted soils to the final sub-grade elevations and in areas of known deeper contamination, confirmatory soil samples will be collected from the bottom of the excavation to document the concentration of residual PCB levels.

According to the workers' health and safety protocols, two air monitoring stations will be set up at up-wind and down-wind locations to monitor air quality containing possible PCB-impacted soil particulates. In particular, during soil excavation and loading activities, air samples will be collected and analyzed using EPA Method "TO-10/8082" for PCB.

All elements of the risk management plan implemented at EmeryStation II will be implemented according to SOMA's standard operation procedure set forth in our July 13, 2000 report, entitled "Implementation of Site-Specific Risk Management Plan During The Pile Cap Excavation at EmeryStation II". The elements of risk management principals will include:

1. Dust Control
2. Air Monitoring
3. Storm Water Pollution Control
4. Management of Perched Groundwater
5. Using Protective Clothing
6. Decontamination

Task 4: Report Preparation

Upon completion of the remediation activities, a written report will be prepared to document the soil characterization and remediation process and the implementation of the risk management plan at the Property. The report will include the results of laboratory analyses of soil, air and groundwater and

References

SOMA Environmental Engineering, Inc. September 6, 2001, "Additional Site Characterization for Delineation of PCB-Impacted Soils Beneath the East Parking Lot Located at 6121 Hollis Street, Emeryville, California"

SOMA Environmental Engineering, Inc. August 8, 2000, "Delineation of the Extent of PCBs Contamination at the Heritage Square Property Located at 6121 Hollis Street, Emeryville, California"

SOMA Environmental Engineering, Inc., July 13, 2000 "Implementation of Site-Specific Risk Management Plan During the Pile Cap Excavation at Emery Station II, Former Westinghouse Electric Facility, 5815 Peladeau Street, Emeryville, California"

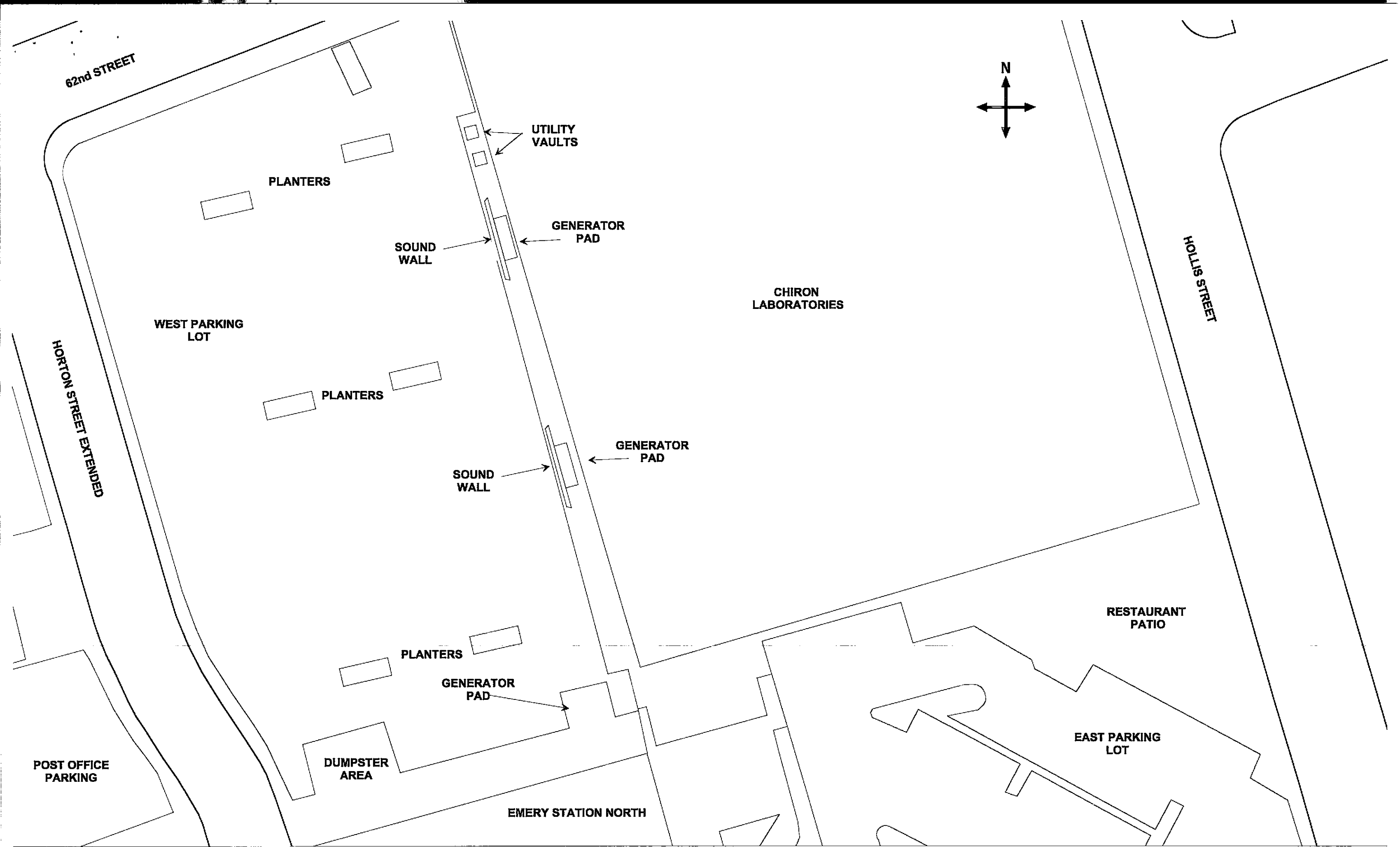
SOMA Environmental Engineering, Inc., "Baseline Human Health Risk Assessment for the Former Westinghouse Electric Facility, 5899 Peladeau Street, Emeryville, California"

SOMA Environmental Engineering, Inc. April 11, 2001, "Characterization and Remediation of PCB-Impacted Soils Beneath the Horton Street Right-of-Way Extension Between 59th and 62nd Streets Emeryville, California"

FIGURES



Figure 1: Site vicinity map.



approximate scale in feet
 0 30 60

Figure 2: Site map showing the locations of the north and east parking lots.



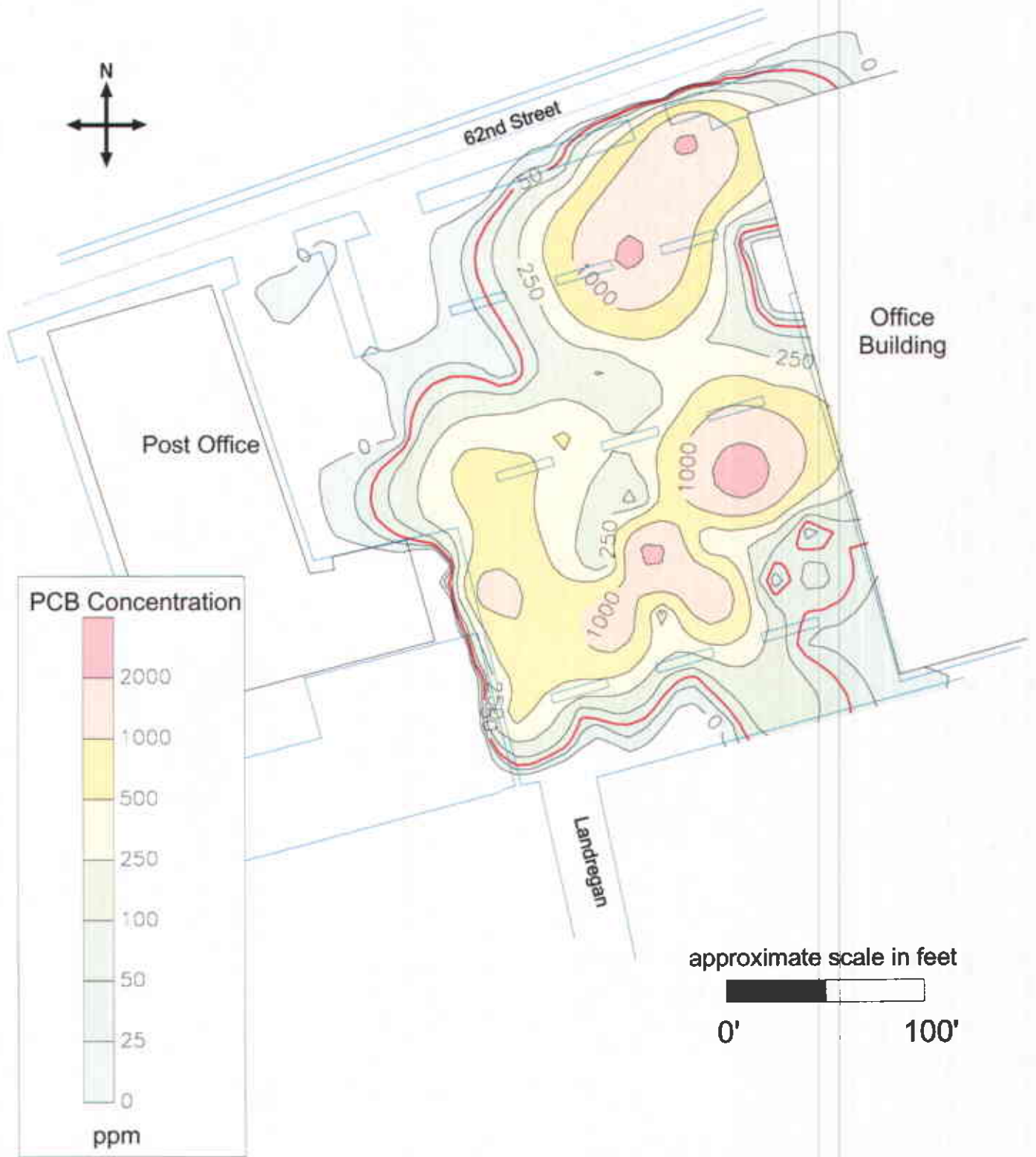


Figure 3: Contour Map of PCB Concentrations (ppm) at 0.5' Depth

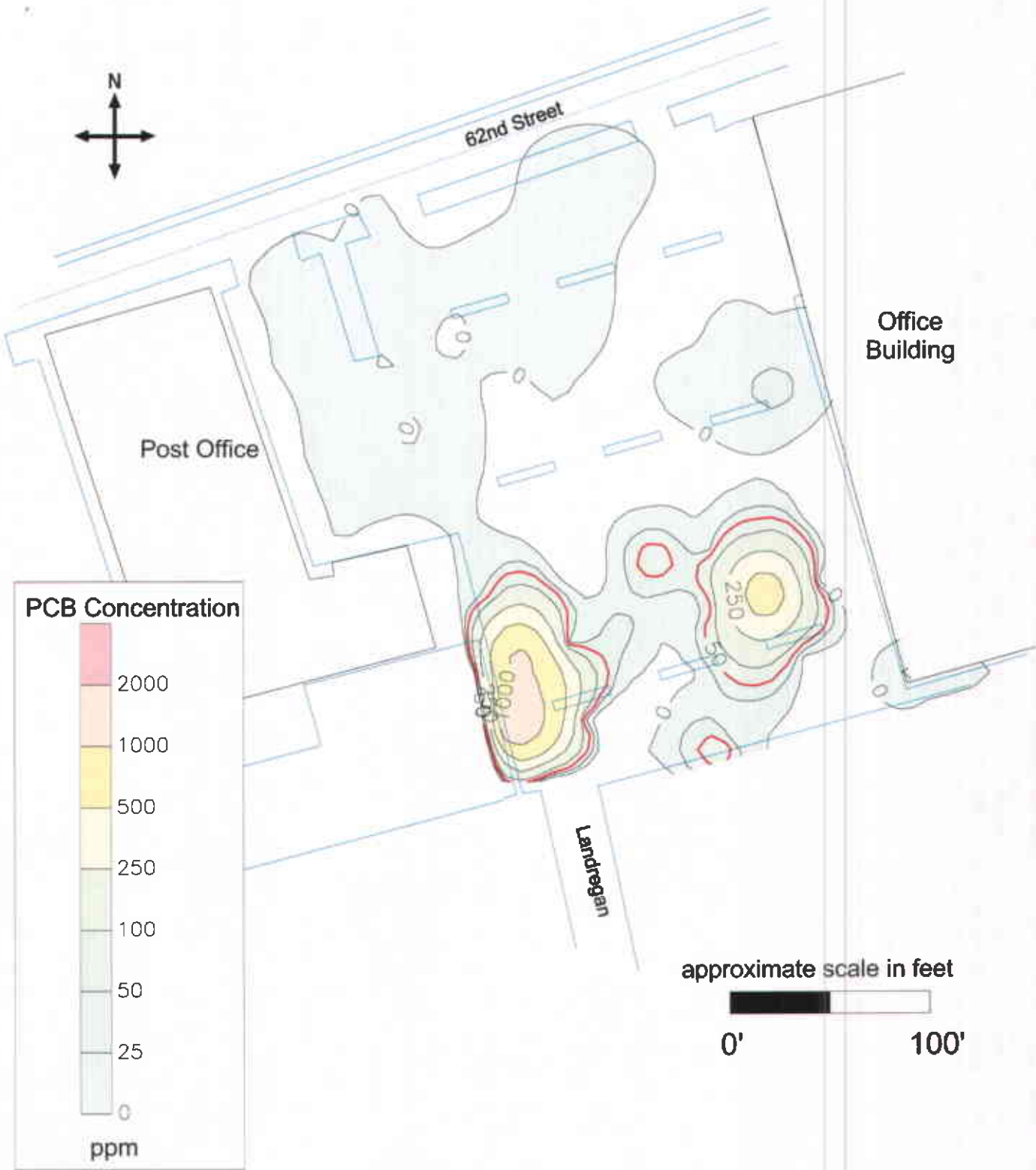


Figure 04: Contour Map of PCB Concentrations (ppm) at 3.5' Depth

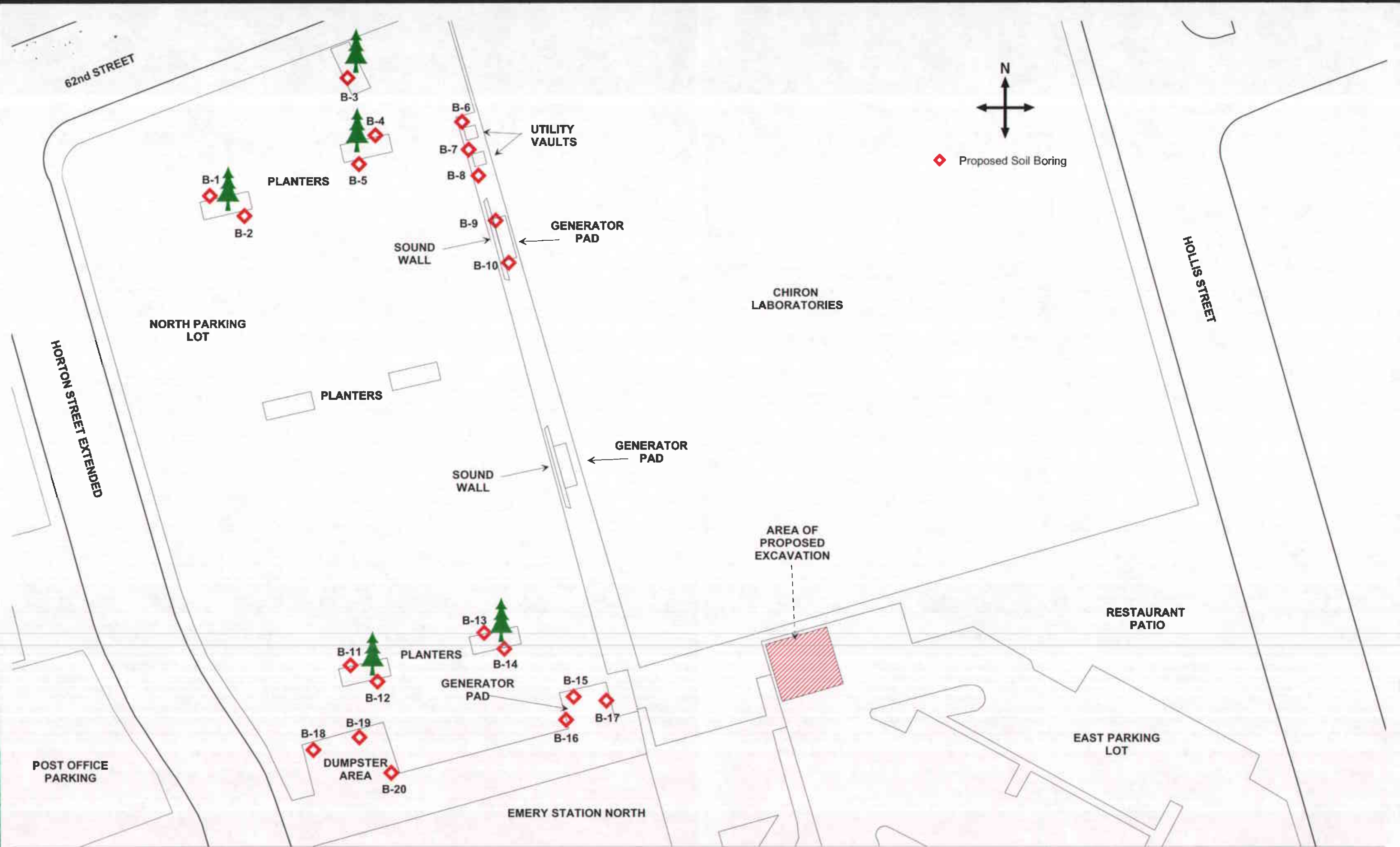


Figure 5: Locations of proposed soil borings before initiation of soil cleanup process.